

## **Chapter 2. Proposed Action and Alternatives**

This page intentionally  
left blank

# Table of Contents

<b>Dear Reader Letter .....</b>	<b>ix</b>
<b>Executive Summary .....</b>	<b>xi</b>
<b>1. Introduction .....</b>	<b>1</b>
<b>2. Proposed Action and Alternatives .....</b>	<b>1</b>
2.1. Introduction .....	3
2.1.1. Nevada and Northeastern California Sub-region .....	3
2.2. Introduction to LUP Alternatives .....	4
2.3. Alternative Development Process for the Nevada and Northeastern California Greater Sage-Grouse Land Use Plan Amendment .....	5
2.3.1. Develop a Reasonable Range of Alternatives .....	6
2.4. Alternatives Considered in Detail .....	6
2.4.1. Alternative A: No Action .....	12
2.4.2. Alternative B .....	12
2.4.3. Alternative C .....	13
2.4.4. Alternative D .....	13
2.4.5. Alternative E .....	14
2.4.6. Alternative F .....	15
2.5. Management Common to All Alternatives .....	15
2.5.1. BLM and Forest Service Vegetation Management .....	16
2.5.2. Monitoring for the Greater Sage-Grouse Planning Strategy .....	18
2.5.3. Adaptive Management .....	19
2.6. Alternatives Eliminated from Detailed Analysis .....	21
2.6.1. Close All or Portions of Preliminary Priority or Preliminary General Management Areas to Off-Highway Vehicle Use .....	21
2.6.2. Elko County Sage-Grouse Plan .....	22
2.6.3. Increased Grazing Alternative .....	23
2.7. Considerations for Selecting a Preferred Alternative .....	23
2.8. Comparison of Alternatives .....	24
2.8.1. No Action Alternative .....	24
2.8.2. Action Alternatives .....	41
2.9. Summary of Environmental Consequences .....	325
2.10. Comparison of Alternatives Alleviation of USFWS-Identified Threats .....	354

This page intentionally  
left blank

## List of Figures

Figure 2.1. Alternative A: Preliminary Priority and General Habitat .....	354
Figure 2.2. Alternative B: Preliminary Priority and General Management Areas .....	354
Figure 2.3. Alternative C: Preliminary Priority Management Areas .....	354
Figure 2.4. Alternative D: Preliminary Priority and General Management Areas .....	354
Figure 2.5. Alternative E: Greater Sage-Grouse Management Areas Occupied and Suitable Habitat .....	354
Figure 2.6. Alternative F: Preliminary Priority and General Management Areas .....	354
Figure 2.7. Alternatives A, B, C, and F: Wild Horses and Burros .....	354
Figure 2.8. Alternative D: Wild Horses and Burros .....	354
Figure 2.9. Alternative E: Wild Horses and Burros .....	355
Figure 2.10. Alternative A: Livestock Grazing .....	355
Figure 2.11. Alternative C Livestock Grazing .....	355
Figure 2.12. Alternative A: Comprehensive Travel and Transportation Management .....	355
Figure 2.13. Alternatives B and F: Comprehensive Travel and Transportation Management ....	355
Figure 2.14. Alternative C: Comprehensive Travel and Transportation Management .....	355
Figure 2.15. Alternative D: Comprehensive Travel and Transportation Management .....	355
Figure 2.16. Alternative E: Comprehensive Travel and Transportation Management .....	355
Figure 2.17. Alternative A: ROW Exclusion and Avoidance .....	355
Figure 2.18. Alternative B: ROW Exclusion and Avoidance .....	355
Figure 2.19. Alternative C: ROW Exclusion and Avoidance .....	355
Figure 2.20. Alternative D: ROW Exclusion and Avoidance .....	355
Figure 2.21. Alternative E: ROW Exclusion and Avoidance .....	355
Figure 2.22. Alternative F: ROW Exclusion and Avoidance .....	355
Figure 2.23. Alternative A: Land Tenure .....	356
Figure 2.24. Alternative B: Land Tenure .....	356
Figure 2.25. Alternative C: Land Tenure .....	356
Figure 2.26. Alternative D: Land Tenure .....	356
Figure 2.27. Alternative F: Land Tenure .....	356
Figure 2.28. Alternatives A, B, and C: Wind ROW Exclusion and Avoidance .....	356
Figure 2.29. Alternative D: Wind ROW Exclusion and Avoidance .....	356
Figure 2.30. Alternative E: Wind ROW Exclusion and Avoidance .....	356
Figure 2.31. Alternative F: Wind ROW Exclusion and Avoidance .....	356
Figure 2.32. Alternatives A, B, and F: Utility-Scale Solar .....	356
Figure 2.33. Alternative C: Utility-Scale Solar .....	356
Figure 2.34. Alternative D: Utility-Scale Solar .....	356
Figure 2.35. Alternative E: Utility-Scale Solar .....	356
Figure 2.36. Alternative A: Open and Closed to Oil and Gas .....	356
Figure 2.37. Alternative B: Open and Closed to Oil and Gas .....	357
Figure 2.38. Alternative C: Open and Closed to Oil and Gas .....	357
Figure 2.39. Alternative D: Open and Closed to Oil and Gas .....	357
Figure 2.40. Alternative F: Open and Closed to Oil and Gas .....	357
Figure 2.41. Alternative B: Open to Oil and Gas, Leased, No New Surface Occupancy .....	357
Figure 2.42. Alternative D: Open to Oil and Gas, Un-leased, No Surface Occupancy .....	357
Figure 2.43. Alternative E: Open to Oil and Gas, Avoidance .....	357
Figure 2.44. Alternative A: Open and Closed to Geothermal .....	357
Figure 2.45. Alternative B: Open and Closed to Geothermal .....	357
Figure 2.46. Alternative C: Open and Closed to Geothermal .....	357
Figure 2.47. Alternative D: Open and Closed to Geothermal .....	357

Figure 2.48. Alternative F: Open and Closed to Geothermal .....	357
Figure 2.49. Alternative B: Open to Geothermal, Un-leased, No New Surface Occupancy .....	357
Figure 2.50. Alternative D: Open to Geothermal, Leased, No Surface Occupancy .....	357
Figure 2.51. Alternative E: Open to Geothermal, Avoidance .....	358
Figure 2.52. Alternative A: Locatable Minerals .....	358
Figure 2.53. Alternatives B and F: Locatable Minerals .....	358
Figure 2.54. Alternative C: Locatable Minerals .....	358
Figure 2.55. Alternative D: Locatable Minerals .....	358
Figure 2.56. Alternative E: Locatable Minerals .....	358
Figure 2.57. Alternative A: Open and Closed to Mineral Material Sales .....	358
Figure 2.58. Alternatives B and F: Open and Closed to Mineral Material Sales .....	358
Figure 2.59. Alternative C: Open and Closed to Mineral Material Sales .....	358
Figure 2.60. Alternative D: Open and Closed to Mineral Material Sales .....	358
Figure 2.61. Alternative E: Open and Closed to Mineral Material Sales .....	358
Figure 2.62. Alternative A: Open and Closed to Nonenergy Leasable Minerals .....	358
Figure 2.63. Alternatives B and F: Open and Closed to Nonenergy Leasable Minerals .....	358
Figure 2.64. Alternative C: Open and Closed to Nonenergy Leasable Minerals .....	358
Figure 2.65. Alternative D: Open and Closed to Nonenergy Leasable Minerals .....	359
Figure 2.66. Alternative E: Open and Closed to Nonenergy Leasable Minerals .....	359
Figure 2.67. Alternatives A, B, D, and E: Areas of Critical Environmental Concern .....	359
Figure 2.68. Alternative C: Areas of Critical Environmental Concern .....	359
Figure 2.69. Alternative F: Areas of Critical Environmental Concern .....	359

### List of Tables

Table 2.1. USFWS-Identified Threats to Greater Sage-Grouse and Its Habitat and Applicable BLM and Forest Service LUP Resource Programs for Addressing Threats .....	8
Table 2.2. Land Use Plans Considered in the No Action Alternative .....	25
Table 2.3. Comparative Allocation Summary of Alternatives .....	33
Table 2.4. Description of Alternative Goals and Objectives .....	42
Table 2.5. Description of Alternative Actions .....	91
Table 2.6. Proposed Habitat Objectives for Greater Sage-Grouse .....	323
Table 2.7. Guidelines for Establishing Allowable Use Levels if Not Meeting (or Not Making Progress Toward) GRSG Objectives .....	324
Table 2.8. Summary of Environmental Consequences .....	326

This page intentionally  
left blank



## 2.1. Introduction

The BLM and Forest Service developed this LUPA/EIS to provide management direction for over 43 million acres of land administered by the BLM and Forest Service in the Great Basin Region. This LUPA/EIS analyzes alternatives that address threats to GRSG habitat identified in the USFWS listing decision.

The LUPA/EIS complies with NEPA, which directs the BLM and Forest Service to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources...” (NEPA Section 102[2][e]). At the heart of the alternative development process is the required development of a reasonable range of alternatives. Public and internal (within BLM and Forest Service) scoping (see **Section 1.5**, Scoping and Identification of Issues for Development of the Proposed Plan and Draft Alternatives) identified issues that present opportunities for alternative courses of action, while the purpose and need for action described in **Section 1.3**, Purpose and Need, provides sideboards for determining “reasonableness.”

This chapter details the No Action Alternative, which would continue the existing policies of the BLM and Forest Service; five action alternatives; and the alternatives considered but eliminated from detailed analysis. Figures located at the end of this chapter show where actions are applicable. The alternatives respond to USFWS-identified issues and threats to GRSG and its habitat. They create management consistency for GRSG and its habitat across the range of the species, such that a potential listing for GRSG as threatened or endangered species under the ESA in 2015 will be unnecessary.

### 2.1.1. Nevada and Northeastern California Sub-region

The Nevada and Northeastern California Sub-region includes public lands administered by the BLM Nevada and BLM California, and Humboldt-Toiyabe National Forest lands administered by the Forest Service. This LUPA will amend 13 LUPs to provide consistent management of GRSG habitat for all BLM- and Forest Service-administered lands included within the sub-region.

#### **BLM**

The Battle Mountain, Carson City, Elko, Ely, and Winnemucca BLM District Offices in Nevada and the Alturas, Eagle Lake, and Surprise BLM Field Offices in California administer the 11 pertinent RMPs being amended by this LUPA/EIS.

The Battle Mountain District encompasses approximately 10.5 million acres of public land within Lander, Eureka, Esmeralda, and Nye Counties in Nevada. The Shoshone-Eureka and the Tonopah RMPs will be amended by this LUPA/EIS.

The Carson City District encompasses approximately 5 million acres of public land in 11 counties in western Nevada and eastern California. These include Carson City, Churchill, Douglas, Lyon, Mineral, Nye, Storey, and Washoe Counties within Nevada, and Alpine, Lassen, and Plumas Counties within California. The Carson City Consolidated RMP will be amended by this LUPA/EIS.

The Elko District encompasses approximately 7.5 million acres of public land within Elko, Eureka, and Lander Counties in eastern Nevada. The Elko and Wells RMPs will be amended by this LUPA/EIS.

The Ely District encompasses approximately 11.5 million acres of public land within Lincoln, Nye, and White Pine Counties in eastern Nevada. The Ely RMP will be amended by this LUPA/EIS.

The Winnemucca District encompasses approximately 11.2 million acres of public land within Churchill, Humboldt, Lyon, Pershing, and Washoe Counties in northwest Nevada. The Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area and Winnemucca RMPs will be amended by this LUPA/EIS.

The Alturas Field Office encompasses over 503,460 acres of BLM-administered lands in northeastern California. The geographic area includes public lands within Lassen, Modoc, Shasta, and Siskiyou Counties, California. The Alturas RMP will be amended by this LUPA/EIS.

The Eagle Lake Field Office consists of over 1 million acres of BLM-administered lands in northern California and Nevada. The geographic area includes public lands within Lassen, Plumas, and Sierra Counties, California, and Washoe County, Nevada. The Eagle Lake RMP will be amended by this LUPA/EIS.

The Surprise Field Office encompasses approximately 1.2 million acres of BLM-administered lands in northern California and Nevada. The geographic area includes public lands within Lassen and Modoc Counties, California and Humboldt and Washoe Counties, Nevada. The Surprise RMP will be amended by this LUPA/EIS.

### **Forest Service**

The Humboldt-Toiyabe National Forest encompasses approximately 4.5 million acres of public land within Churchill, Elko, Humboldt, Lyon, Pershing, and Washoe Counties in Nevada and a small portion of eastern California. The Toiyabe National Forest and the Humboldt National Forest LUPs will be amended by this LUPA/EIS.

## **2.2. Introduction to LUP Alternatives**

LUP decisions consist of identifying and clearly defining goals and objectives (desired outcomes) for resources and resource uses, followed by developing allowable uses and management actions necessary for achieving the goals and objectives. These critical determinations guide future land management actions and subsequent site-specific implementation actions to meet multiple use and sustained yield mandates while sustaining land health.

### **Components of Alternatives**

Goals are broad statements of desired (LUP-wide and resource- or resource-use-specific) outcomes and are not quantifiable or measurable. Objectives are specific measurable desired conditions or outcomes intended to meet goals. Goals and objectives can vary across alternatives, resulting in different allowable uses and management actions for some resources and resource uses. Forest Service objectives are also time specific.

Management actions and allowable uses are designed to achieve objectives. Management actions are measures that guide day-to-day and future activities. Allowable uses delineate which uses are permitted, restricted, or prohibited, and may include stipulations or restrictions. Allowable uses also identify lands where specific uses are excluded to protect resource values, or where certain lands are open or closed in response to legislative, regulatory, or policy requirements. Implementation decisions are site-specific on-the-ground actions and are typically not addressed in LUPs.

On Forest Service-administered lands, forest plans guide management activities and may contain goals and objectives as well as S&Gs that provide direction for project planning and design. Standards are mandatory constraints on decision making. Not meeting a standard would require a site-specific forest plan amendment. A guideline is a constraint on decision making that allows for departure from its terms, so long as the purpose of the guideline is met.

### **Purpose of Alternative Development**

Land use planning and NEPA regulations require the BLM and Forest Service to formulate a reasonable range of alternatives. Alternative development is guided by established planning criteria (as outlined for the BLM at 43 CFR 1610).

The NEPA regulations at 40 CFR Part 1501.2(c) state that federal agencies shall:

Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflict concerning alternatives uses of available resources...

The basic goal of alternative development is to produce distinct potential management scenarios that:

- Address the identified major planning issues
- Explore opportunities to enhance management of resources and resource uses
- Resolve conflicts among resources and resource uses
- Meet the purpose of and need for the LUP or LUPA

Pursuit of this goal provides the BLM, Forest Service, and the public with an appreciation for the diverse ways in which conflicts regarding resources and resource uses might be resolved, and offers the BLM State Directors and Forest Service Forest Supervisor a reasonable range of alternatives from which to make an informed decision. The components and broad aim of each alternative considered for the Nevada and Northeastern California Sub-region GRSG LUPA/EIS are discussed below.

## **2.3. Alternative Development Process for the Nevada and Northeastern California Greater Sage-Grouse Land Use Plan Amendment**

The Nevada and Northeastern California Sub-region GRSG LUPA/EIS planning team employed the BLM planning process (outlined in **Section 1.4**, Planning Process) to develop a reasonable range of alternatives for the LUPA/EIS. The BLM and Forest Service complied with NEPA and the CEQ implementing regulations at 40 CFR Part 1500 in the development of alternatives

for this draft LUPA/EIS, including seeking public input and analyzing reasonable alternatives. Where necessary to meet the planning criteria, to address issues and comments from cooperating agencies and the public, or to provide a reasonable range of alternatives, the alternatives include management options for the planning area that would modify or amend decisions made in the applicable LUP. Since this LUPA/EIS will specifically address GRSG conservation, many decisions within existing LUPs that do not impact GRSG are acceptable and reasonable; in these instances, there is no need to develop alternative management prescriptions.

Public input received during the scoping process was considered to identify significant issues deserving of detailed study to help identify alternatives. The planning team developed planning issues to be addressed in the LUPA/EIS, based on broad concerns or controversies related to conditions, trends, needs, and existing and potential uses of planning area lands and resources. All comments were reviewed to determine whether they identified significant issues or unresolved conflicts.

### 2.3.1. Develop a Reasonable Range of Alternatives

Between May and September 2012, the planning team (BLM, Forest Service, and cooperating agencies) met to develop management goals and to identify objectives and actions to address the goals. The various groups met numerous times throughout this period to refine their work. As outcomes of this process, the planning team:

- Developed one No Action Alternative (Alternative A) and two preliminary action alternatives. The first action alternative (Alternative B) is based on *A Report on National Greater Sage-Grouse Conservation Measures* (NTT 2011), and the second action alternative (Alternative C) is based on a proposed alternative submitted by conservation groups
- Customized the goals, objectives, and actions from the NTT-based alternative (Alternative B) to develop a third action alternative (Alternative D) that strives for balance among competing interests
- Incorporated proposed GRSG protection measures recommended by state governments as a fifth alternative (Alternative E)
- Separated Alternative C into two distinct alternatives and developed Alternative F, the sixth alternative, which includes similar goals, objectives, and actions as Alternative C; however, it contains elements submitted by the conservation groups

Each of the preliminary action alternatives was designed to:

- Address the 13 planning issues (identified in **Section 1.5.2**, Issues Identified for Consideration in the Nevada and Northeastern California Sub-region Greater Sage-Grouse LUPAs)
- Fulfill the purpose and need for the LUPA (outlined in **Section 1.3**, Purpose and Need)
- Meet the multiple use mandates of the FLPMA (43 CFR 1716), MUSYA and NFMA

## 2.4. Alternatives Considered in Detail

The five resulting action alternatives (Alternatives B, C, D, E, and F) offer a range of possible management approaches for responding to planning issues and concerns identified through public

scoping, and to maintain or increase GRSG abundance and distribution in the planning area. While the goal is the same across alternatives, each alternative contains a discrete set of objectives and management actions constituting a separate LUPA. The goal is met in varying degrees, with the potential for different long-range outcomes and conditions.

The relative emphasis given to particular resources and resource uses differs as well, including allowable uses, restoration measures, and specific direction pertaining to individual resource programs. When resources or resource uses are mandated by law or are not tied to planning issues, there are typically few or no distinctions between alternatives.

The action alternatives are directed towards responding to USFWS-identified issues and threats to GRSG and their habitat. **Table 2-1**, USFWS-Identified Threats to Greater Sage-Grouse and Its Habitat and Applicable BLM and Forest LUP Resource Programs for Addressing Threats, identifies the threats throughout all of the GRSG planning sub-regions and the applicable BLM and Forest Service resource programs in LUPs for addressing the threats.

The meaningful differences among the alternatives are described in **Section 2.8**, Comparison of Alternatives. This section also provides a complete description of the proposed decisions for each alternative, including the project goal and objectives, management actions, and allowable uses for individual resource programs. Figures at the end of this chapter provide a visual representation of differences between alternatives. In some instances, varying levels of management overlap a single area, or polygon, due to management prescriptions from different resource programs. In instances where varying levels of management prescriptions overlap a single polygon, the stricter of the management prescriptions would apply.

PPMAs and PGMAs are based on mapping of PPH and PGH, as described in 1.1.1, BLM and Forest Service Habitat Mapping. PPMAs and PGMAs vary by alternative, based on management objectives. Alternatives B and F include all mapped PPH and PGH within PPMAs and PGMAs. Alternative C combines PPH and PGH into PPMAs. Alternative D adjusts the delineation of PPH and PGH to reflect existing land uses, use authorizations, land allocations, and habitat considerations; it adds or subtracts mapped PPH or PGH to create PPMAs and PGMAs across the sub-region. Alternative E creates Sage-Grouse Management Areas (SGMAs), which include occupied, suitable, and potential habitat and nonhabitat. The effects of these variations on PPMA, PGMA, and SGMA acreages are reflected in Table 2-3.

The USFWS developed the COT Report (USFWS 2013a), which identifies key areas across the landscape considered “necessary to maintain redundant, representative, and resilient populations.” The USFWS identified these priority areas for consideration (PACs) with the respective state wildlife management agencies. Within the sub-region, PACs are not coincident with PPH and PGH or with PPMA/PGMAs, with the exception of the SGMAs identified in Alternative E, the state-provided alternative. PPH and PGH were mapped in a separate process, using the criteria identified in Chapter 3. PACs do not include all PPH and PGH but do include additional areas of potential habitat and nonhabitat. The COT recognizes these differences in mapping and acknowledges the potential for future modifications or additions of PACs through ongoing interagency coordination and the results of the LUP planning process.

**Table 2.1. USFWS-Identified Threats to Greater Sage-Grouse and Its Habitat and Applicable BLM and Forest Service LUP Resource Programs for Addressing Threats**

USFWS-Identified Threats to GRSG and Their Habitat	COT Report-Identified Threats to GRSG and Their Habitat	Applicable BLM/Forest Service LUP Resource Program for Addressing the Threat	Decisions Made Under the BLM Resource Programs	Directions Made Under Forest Service LRMP Resource Programs
Wildland Fire	Fire	Wildland Fire Management	Changes to fire management strategies; identify areas suitable/unsuitable for wildland fire use; identify priority areas for suppression	Similar
Invasive Species	Nonnative, Invasive Plants Species	Vegetation	Weed control, suppression, or eradication via natural processes; restrictions on allowable uses; active management or treatment	Similar
		Range Management	Allowable use restrictions	Similar
		Fire Management	Active management or treatment	See Wildland Fire
		Recreation	Restrictions and best management practices (BMPs) associated with Special Recreation Permits (SRPs)	Similar
Oil and Gas  For wind energy development, see <i>Infrastructure – power lines/pipelines, roads</i>	Energy Development	Lands and Realty Management	Issue ROW grant; identify ROW avoidance or exclusion areas	Identify Standards and Guidelines for Resource Protection
		Fluid Minerals	Identify open and closed areas to fluid mineral leasing; Identify open areas with no surface occupancy (NSO), controlled surface use (CSU), and timing limitation (TL) stipulations	Identify Stipulations for Resource Protection
Prescribed Fire	Sagebrush Removal	Vegetation Management	Identify vegetation treatment areas, Conduct vegetation treatments	Establish Desired Future Condition as Objective for Treatment
		Wildland Fire Management	Establish fire management strategies; identify areas suitable and unsuitable for prescribed fire use	See Wildland Fire

USFWS-Identified Threats to GRSG and Their Habitat	COT Report-Identified Threats to GRSG and Their Habitat	Applicable BLM/Forest Service LUP Resource Program for Addressing the Threat	Decisions Made Under the BLM Resource Programs	Directions Made Under Forest Service LRMP Resource Programs
Grazing	Grazing	Range Management	Identify acres closed to livestock grazing; establish animal unit-months (AUMs); manage grazing systems; conduct range improvements; identify season of use; identify stocking rates	Identify Suitable and Unsuitable acres  Identify Use Rates  Provide Standards and Guidelines for range Improvements
		Wild Horse and Burro Management	Identify herd management areas (HMAs) and wild horse and burro territories (WHBTs)	Manage Populations Levels
		Special Status Species	Identify habitat management	Similar
		Vegetation Management	Identify vegetation treatment areas, Conduct vegetation treatments	Establish Desired Future Condition as Objective for Treatment
See <i>Grazing Management (above)</i>	Range Management Structures	Range Management	See <i>Grazing</i> above	Same
<i>No similar threat identified</i>	Free-Roaming Equid Management	Wild Horse and Burro	Identify HMAs and WHBTs	See above
Conifer Encroachment	Pinyon-Juniper Expansion	Wildland Fire Management	Active management or treatment	See Wildland fire
		Vegetation Management	Identify vegetation treatment areas, conduct vegetation treatments	Establish Desired Future Condition as Objective for Treatment
Agriculture & Urbanization	Agricultural Conversion and Ex-Urban Development	Lands & Realty	Identify retention, disposal, and acquisition areas (specifically addressed in Alternative E and displayed in the amelioration threat table)	Similar

USFWS-Identified Threats to GRSG and Their Habitat	COT Report-Identified Threats to GRSG and Their Habitat	Applicable BLM/Forest Service LUP Resource Program for Addressing the Threat	Decisions Made Under the BLM Resource Programs	Directions Made Under Forest Service LRMP Resource Programs
Hard Rock Mining	Mining	Lands and Realty	Petition to withdraw lands from locatable mineral development; establish terms, conditions, or special considerations	Recommend areas for withdrawal
		Lands and Realty	Identify open and closed areas to mineral materials disposal; establish terms, conditions, or special considerations	Identify Standards and Guidelines for Resource Protection
		Lands and Realty	Identify open and closed areas to non-energy leasable minerals; establish terms, conditions, or special considerations	Identify Standards and Guidelines for Resource Protection
See <i>Infrastructure, Roads</i>	Recreation	Recreation	See <i>Infrastructure – roads</i> (below); Issue SRPs	Identify Standards and Guidelines for Resource Protection
Infrastructure <ul style="list-style-type: none"> <li>• Power lines/pipelines</li> <li>• Roads</li> <li>• Communication sites</li> <li>• Railroads</li> <li>• Range improvements (see below)</li> </ul>	Infrastructure	Lands and Realty - Utilities	Issue ROW grant; identify ROW avoidance or exclusion areas; identify utility corridors	Identify Standards and Guidelines for Resource Protection
		Lands and Realty – Communication Sites	Issue ROW grant; Identify ROW avoidance or exclusion areas	Identify Standards and Guidelines for Resource Protection
		Comprehensive Trails and Travel Management – Roads	Identify motorized and nonmotorized travel routes and areas, including areas open, limited, or closed to OHVs	Identify Standards and Guidelines for Resource Protection
		Lands and Realty - Railroads	Issue ROW grant; Identify ROW avoidance or exclusion areas	Identify Standards and Guidelines for Resource Protection
Infrastructure – Range Improvements	Range Management Structures	All applicable programs	Authorize installation or removal of structural range improvements. Installation or removal of structural range improvements.	Provide Standards and Guidelines for range Improvements
		Comprehensive Trails and Travel Management	Installation or removal of fences, culverts, or stream crossings	Identify Standards and Guidelines for Resource Protection



USFWS-Identified Threats to GRSG and Their Habitat	COT Report-Identified Threats to GRSG and Their Habitat	Applicable BLM/Forest Service LUP Resource Program for Addressing the Threat	Decisions Made Under the BLM Resource Programs	Directions Made Under Forest Service LRMP Resource Programs
Water Developments	No similar threat identified	All applicable programs	Identify number, location, and type of range water developments	Provide Standards and Guidelines for range Improvements
Climate Change	No similar threat identified	There is no BLM resource planning program for addressing this threat to GRSG and its habitat. Proposed climate change management is incorporated in other resource programs throughout Chapter 2.	Not applicable	1. Identify Desired Future Condition for Vegetation to provide for a resilient vegetation community  2. Identify Standards and Guidelines for implementation of vegetation treatments  3. Development Adaptive Management Strategy
Weather	No similar threat identified	There is not a resource program in the BLM RMPs for addressing this USFWS-identified threat.	Not applicable	Same
Predation	No similar threat identified	All applicable programs	Establish design features and BMPs to reduce avian predator perching and nesting on structures	Similar
Disease	No similar threat identified	All applicable programs	Establish design features and BMPs to reduce risk for West Nile virus	Similar
Hunting	No similar threat identified	There is no resource program in the BLM RMPs for addressing this USFWS-identified threat	Not applicable	Very Limited
Contaminants	No similar threat identified	Mineral Resources	Plan of Operation requirements	Similar
		Public Health and Safety	Remediate and resolve illegal dumping	Similar
Source: USFWS 2010, 2013				

### 2.4.1. Alternative A: No Action

Alternative A meets the CEQ requirement that a No Action Alternative be considered. This alternative continues current management direction and prevailing conditions derived from the existing field/district office and forest planning documents. Goals and objectives for resources and resource uses are based on the most recent LUP decisions, along with associated amendments, activity- and implementation-level plans, and other management decision documents. Laws, regulations, and BLM and Forest Service policies that supersede LUP decisions would apply. The No Action Alternative highlights those decisions that can be shown to have a direct effect or link to conserving or restoring GRSG habitat or sagebrush vegetation communities that support GRSG throughout its life cycle. Because there are few management decisions that are common to all 13 LUPs, a summary of the general management per threat is discussed.

Goals and objectives for BLM- and Forest Service-administered lands and mineral estate would not change. Appropriate and allowable uses and restrictions pertaining to activities such as mineral leasing and development, recreation, construction of utility corridors, and livestock grazing would also remain the same. The BLM and Forest Service would not modify existing or establish additional criteria to guide the identification of site-specific use levels for implementation activities.

### 2.4.2. Alternative B

GRSG conservation measures in *A Report on National Greater Sage-Grouse Conservation Measures* (NTT 2011) were used to form BLM and Forest Service management direction under Alternative B. Management actions by the BLM and Forest Service in concert with other federal, state, and local agencies, tribes, and private land owners play a critical role in the future trends of GRSG populations. To ensure BLM and Forest Service management actions are effective and based on the best available science, the BLM's National Policy Team created the NTT in August 2011. The BLM's objective for chartering this planning strategy effort was to develop new or revised regulatory mechanisms, through LUPs, to conserve and restore GRSG and its habitat on BLM- and Forest Service-administered lands on a range-wide basis over the long term. Conservation measures in the report are applied to GRSG PPMAs and to a lesser extent to PGMAs. The alternative includes all mapped PPH and PGH (Section 1.1.1) within PPMAs and PGMAs, with no adjustments. PPMAs have the highest conservation value to maintaining or increasing GRSG populations. The complete NTT report can be reviewed online at:

<http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSGTechTeamReport.pdf>.

The BMPs proposed in the NTT report are included as required design features (RDFs) as part of Alternative B and are listed in **Appendix A**, Required Design Features, of this document. The RDFs mirror the NTT BMPs with one exception: the locatable mineral BMPs are carried forward as BMPs because the General Mining Act of 1872 prevents the agencies from imposing use restrictions on mining claims.

Management actions from the NTT Report concerning coal are not applicable to the Nevada and Northeastern California Sub-region since there are no reasonably developable coal resources within the planning area. Accordingly, the portion of the NTT Report that addresses coal leasing will not be carried forward as part of Alternative B.

### 2.4.3. Alternative C

During scoping individuals and conservation groups submitted management direction recommendations for protection and conservation of GRSG and its habitat. The recommendations, in conjunction with resource allocation opportunities and internal sub-regional BLM and Forest Service input, were reviewed to develop BLM and Forest Service management direction for GRSG under Alternative C. Management actions under Alternative C are applied to PPMAs and focus on the complete removal of livestock grazing from the landscape to alleviate threats to GRSG. PPMAs include both PPH and PGH.

### 2.4.4. Alternative D

Alternative D is the BLM and Forest Service, Nevada and Northeastern California Sub-region's adjustments alternative, which emphasizes balancing resources and resource use among competing human interests, land uses, and the conservation of natural and cultural resource values, while sustaining and enhancing ecological integrity across the landscape, including plant, wildlife, and fish habitat. This alternative, which designates and applies management to PPMAs and PGMA, seeks to provide a balanced level of protection, restoration, enhancement, and use of resources and services to meet ongoing programs and land uses.

The alternative adjusts the delineation of PPMAs and PGMA to reflect existing land uses, use authorizations, land allocations, and habitat considerations. Areas of PPH next to large-scale mining or EIS level mine expansions, or within developed utility/transportation corridors would be managed as PGMA. PGH in designated wilderness or within wilderness study areas would be managed as PPMA. Mapped PPH in the isolated and highly fragmented Northwest Interior population would be managed as PGMA.

PGH in an area of high potential for ensuring genetic connectivity across the I-80/checkerboard land ownership corridor would be managed as PPMA. The alternative provides for up to 10 percent adjustment in PPMAs and PGMA to adapt to changing conditions such as climate change, wildfire, and population dynamics (e.g., genetic and seasonal range connectivity), which may change due to habitat conditions or new information.

This alternative seeks to provide for no unmitigated loss to occupied GRSG habitat, as described below.

Continued losses of GRSG habitat through natural events such as wildfire are expected to continue. Therefore, it is incumbent on the BLM and Forest Service to minimize loss of habitat or habitat functionality arising from discretionary agency actions or authorizations.

The concept of "no unmitigated loss" includes a suite of actions that can be taken to off-set or restore direct and indirect disturbances on GRSG habitat. This includes conducting restoration or other appropriate actions (e.g., fence marking to reduce collision risk, and avian predator diverters) in advance of or concurrent with human activities that disrupt GRSG behavior, remove habitat or degrade habitat quality, and/or functionality.

These actions include:

- Siting activities in landscapes that do not provide habitat currently and are not likely to be restorable to habitat

- Rejecting use applications or nominations that cannot be adequately mitigated and where the agencies have discretion to do so
- Applying RDFs and mitigation measures at a level that will offset immediate and long-term effects of the disturbance

Mitigation of anthropogenic uses would be accomplished by specific measures that include:

- On-site measures to minimize disturbance footprints and taking actions to restore the disturbed areas concurrently (such as revegetation and weed treatments while burying power lines or pipelines)
- Off-site mitigation agreements developed cooperatively with Nevada wildlife and conservation agencies for BLM- and Forest Service-administered lands in Nevada
- Prescribed mitigation ratios to offset the immediate and long-term effects of the disturbance
- Conducting restoration in advance of disturbance (such as through the State of Nevada's mitigation banking process)
- Coordination with the state(s) on required restoration (disturbance credits)

Mitigation of natural disturbances would include:

- Taking actions to prevent or reduce human-caused wildfire ignitions
- Conducting treatments (e.g., creating fuel breaks) to prevent and reduce the spread of wildfires and to augment fire suppression tactics
- Conducting restoration treatments in areas burned (including post-fire uses, such as grazing management)
- Conducting treatments to control the spread and dominance of cheatgrass
- Applying habitat restoration or enhancement treatments, such as seeding/planting of perennial grasses, forbs, and shrubs to improve habitat conditions

Because the Nevada and Northeastern California Sub-region GRSG LUPA/EIS is predominantly written in BLM planning language, an appendix (**Appendix B**, Forest Service Alternative D Language) has been added to the document that lays out the BLM and Forest Service proposed alternative in Forest Service nomenclature.

## 2.4.5. Alternative E

Alternative E is based on the State of Nevada's Conservation Plan for GRSG in Nevada (State of Nevada Alternative, Management Actions for the Conservation of the GRSG in the Nevada and Northeastern California Sub-region [State of Nevada 2012]; see **Appendix C**, State of Nevada Alternative) and would apply to all BLM- and Forest Service-administered lands in Nevada. The State of California did not submit a proposal for a complete alternative and as such, Alternative E would only apply to BLM- and Forest Service-administered lands in Nevada. If this alternative was selected as the preferred alternative, then BLM- and Forest Service -administered lands in California would be managed as described under the No Action Alternative (current management actions). The goals, objectives, and actions under Alternative E reflect concurrent state-level

planning efforts for the protection of GRSG and its habitat. State-level planning efforts focus on all lands within the state, regardless of ownership. The actions are applied to federal lands if the federal agencies have the authority to implement them.

The Nevada State Plan identifies 15 Sage-Grouse management areas (SGMAs) located across the state. The SGMA map defines the overall area where the state would like resources to be managed to maintain and expand GRSG populations. SGMAs include PPH and PGH within areas defined as occupied and suitable habitat; they also include potential habitat and nonhabitat. The State of Nevada SGMA map is based on the best biological information and knowledge at this time, taking into account the 85 percent breeding bird density, NDOW PPH and PGH maps, and areas of known resource conflicts.

Key elements of this alternative are:

- Achieving “no net loss” of GRSG habitat by implementation of a strategy to avoid, minimize and mitigate impacts on GRSG
- Establishing the Conservation Credit System
- Establishing the Sagebrush Ecosystem Technical Team

## **2.4.6. Alternative F**

Alternative F is based on recommendations submitted by individuals and conservation groups for the protection and conservation of GRSG and its habitat. Alternative F includes goals and objectives that:

- Increase GRSG populations to a level where they are viable and secure from local extirpation events and, eventually, to a level that allows for an annual harvest surplus
- Restore and maintain sagebrush steppe to its ecological potential in priority, general, and restoration GRSG habitat
- Establish a system of sagebrush reserves to anchor recovery efforts by protecting the highest quality habitats

Management Actions provide for the protection of GRSG habitat. Alternative F differs from Alternative C on issues relating to grazing, wild horse and burro management, lands and realty, and minerals. Management actions for the conservation of GRSG habitat under Alternative F apply to GRSG PPMAs and PGMAs, which are mapped as in Alternative B.

## **2.5. Management Common to All Alternatives**

Allowable uses and management actions from existing LUPs that remain valid are not subject to modification based on management actions identified in the selected alternative. The effects of the allowable uses and management action are included in the cumulative effects analysis. Other decisions are common only to the action alternatives (Alternatives B, C, D, E, and F). Common management actions include:

- Conserve, enhance, and restore the sagebrush ecosystem on which GRSG populations depend, to maintain or increase their abundance and distribution, in cooperation with other conservation partners
- Manage GRSG as a BLM sensitive species and as a Forest Service Management Indicator Species (MIS)
- Comply with state and federal laws, regulations, policies, and standards, including the multiple use mandates of FLPMA and NFMA
- Implement actions originating from laws, regulations, and policies and conform to day-to-day management, monitoring, and administrative functions not specifically addressed
- Recognize valid existing rights, which include any leases, claims, or other use authorizations established before a new or modified authorization, change in land designation, or new or modified regulation is approved; existing fluid mineral leases are managed through Conditions of Approval (COAs) applied at the time the BLM and Forest Service approve an Application for Permit to Drill (APD)
- Collaborate with adjacent landowners, federal and state agencies, tribes, communities, other agencies, and other individuals and organizations, as needed, to monitor and implement decisions to achieve desired resource conditions
- Provide for human safety and property protection from wildfire and then set priorities to protect communities, infrastructure, improvements, and natural and cultural resources, based on values to be protected, human health and safety, and costs
- Apply RDFs (Appendix A) and other site-specific mitigation measures to all resource uses to promote rapid reclamation, maximize resource protection, and minimize soil erosion
- Incorporate the Regional Mitigation Strategy, as outlined in Appendix D
- Implement management action within Wilderness Study Areas (WSAs), lands with wilderness characteristics (LWCs), or other special designated areas to be consistent with policies and procedures that have been established to maintain the current physical setting and characteristics of these units
- Refrain from managing existing federal and state road easements as GRSG habitat and exempt them from the management actions associated with PPMA and PGMA; any new modification or adjustments outside of the existing easement would be subject to the proposed management actions

Actions taken or authorized by the BLM and Forest Service during LUP implementation would comply with standard practices and RDFs. Therefore, these practices and guidelines are considered part of each alternative.

### **2.5.1. BLM and Forest Service Vegetation Management**

Under all alternatives, the BLM and Forest Service will implement a vegetation management program that addresses all programs that rely on healthy plant species and communities to meet their objectives. The BLM and Forest Service's overarching goal for vegetation management is, through an interdisciplinary collaborative process, to plan and implement a set of actions that

improve biological diversity and ecosystem function and promote and maintain native plant communities that are resilient to disturbance and invasive species (BLM 2007a).

The BLM and Forest Service vegetation management strategies common to all alternatives will take into account the condition and use of public lands. These strategies will focus on restoring sites that will most benefit from treatments. The appropriate treatments to improve the likelihood of restoration success will be selected, treatments will be monitored to better understand what treatments are successful or unsuccessful, and information about treatment activities will be conveyed to the BLM and Forest Service and the public.

BLM vegetation treatment policies are an outcome of the Vegetation Treatments Programmatic EIS released in October 2007 (BLM 2007a). The programmatic EIS contains broad regional descriptions of resources, environmental impact analysis, and BLM-wide decisions on herbicide use and other available tools for vegetation management, and provides a programmatic USFWS ESA Section 7 consultation. All implementation-level activities carried out under this plan will tier to the Vegetation Treatments Programmatic EIS, to the extent it applies.

Across all alternatives for weed management in the Nevada and Northeast California Sub-region, the BLM and Forest Service will work closely with local and state agencies to manage and treat weeds on public lands. The BLM and Forest Service will participate in exotic plant pest councils, state vegetation and noxious weed management committees, state invasive species councils, county weed districts, and weed management associations.

When developing mitigation and prevention plans for activities on public lands under all alternatives, the BLM and Forest Service will address conditions that enhance invasive species abundance. These conditions include excessive disturbance associated with road maintenance, grazing that fails to meet standards, and high levels of recreational use. Also, restoration activities will be evaluated as to their ability to maintain invasive annual grass cover below manageable thresholds. The BLM and Forest Service will apply active treatments to remove invasive annual grass and maintain sagebrush/perennial grass communities.

The BLM will also participate in the National Early Warning and Rapid Response System for Invasive Species. The goal of this system is to minimize the establishment and spread of new invasive species through a coordinated framework of public and private processes.

The BLM and Forest Service will also coordinate with and solicit input from, as appropriate, resource advisory groups and nongovernmental organizations, including BLM Resource Advisory Councils (RACs), the Western Governors' Association, the National Association of Counties, the Western Area Power Administration, the National Cattlemen's Association, the National Wool Growers Association, the Society of American Foresters, and the American Forest and Paper Association.

Under all alternatives for fire management/fuels reduction, the BLM and Forest Service will participate with the Wildland Fire Leadership Council, a cooperative, interagency organization dedicated to achieving consistent implementation of the goals, actions, and policies in the National Fire Plan and the Federal Wildland Fire Management Policy.

As directed by the Healthy Forests Restoration Act, the BLM and Forest Service will develop an annual program of work that prioritizes authorized hazardous fuel reduction projects designed to protect at-risk communities or watersheds. In accordance with the Act, funding priority is given to communities that have adopted Community Wildfire Protection Plans or that have taken measures

to encourage willing property owners to reduce fire risk on private property. All prescribed burning is coordinated with state and local air quality agencies to ensure that local air quality is not significantly impacted by BLM and Forest Service activities.

Effectiveness monitoring of vegetation treatments is usually done at the local project implementation level. Monitoring of invasive plant treatment effectiveness can range from site visits to compare the targeted population size against pre-treatment inventory data, to comparing pre-treatment and post-treatment photo points, to more elaborate transect work, depending on the species and site-specific variables.

## **2.5.2. Monitoring for the Greater Sage-Grouse Planning Strategy**

The BLM's planning regulations, specifically 43 CFR 1610.4-9, require that LUPs establish intervals and standards for monitoring based on the sensitivity of the resource decisions. LUP monitoring is the process of tracking the implementation of LUP decisions (implementation monitoring) and collecting the data/information necessary to evaluate the effectiveness of the LUP decisions (effectiveness monitoring). For GRSG, these types of monitoring are also described in the criteria found in the *Policy for Evaluation of Conservation Efforts When Making Listing Decisions* (USFWS and NOAA 2003). One of the criteria under this policy is to evaluate whether the provisions for monitoring and reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort are provided.

A guiding principle in the BLM National Sage-Grouse Conservation Strategy (DOI 2004) is that "the Bureau is committed to GRSG and sagebrush conservation and will continue to adjust and adapt our National Sage-Grouse Strategy as new information, science, and monitoring results evaluate effectiveness over time." In keeping with the WAFWA Sage-Grouse Comprehensive Conservation Strategy (Stiver et al. 2006) and the GRSG Conservation Objectives: Final Report (USFWS 2013a), the BLM and Forest Service will monitor implementation and effectiveness of conservation measures in GRSG habitats.

On March 5, 2010, USFWS' 12-Month Findings for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered were posted as a Federal Register notice (USFWS 2010a). This notice stated: "...the information collected by BLM could not be used to make broad generalizations about the status of rangelands and management actions. There was a lack of consistency across the range in how questions were interpreted and answered for the data call, which limited our ability to use the results to understand habitat conditions for Sage-Grouse on BLM lands."

Standardization of monitoring methods and implementation of a defensible monitoring approach (within and across jurisdictions) will resolve this situation.

The BLM, Forest Service, and other conservation partners use the resulting information to guide implementation of conservation activities.

Monitoring strategies for GRSG habitat and populations must be collaborative, as habitat occurs across jurisdictional boundaries (52 percent on BLM-administered lands, 31 percent on private lands, 8 percent on Forest Service-administered lands, 5 percent on state lands, and 4 percent on tribal and other federal lands; USFWS 2010a), and state fish and wildlife agencies have primary responsibility for population-level wildlife management, including population



monitoring. Therefore, population efforts will continue to be conducted in partnership with state fish and wildlife agencies.

The BLM and Forest Service framework will describe the process that the BLM and Forest Service will use to monitor implementation and effectiveness of LUPA decisions. The monitoring framework will include methods, data standards, and intervals of monitoring at broad and mid scales; consistent indicators to measure and metric descriptions for each of the scales (see **Appendix E**, Greater Sage-Grouse Draft Monitoring Framework Plan); analysis and reporting methods; and the incorporation of monitoring results into adaptive management. The need for fine-scale and site-specific habitat monitoring may vary by area depending on existing conditions, habitat variability, threats, and land health. Indicators at the fine and site scales will be consistent with the Habitat Assessment Framework; however, the values for the indicators could be adjusted for regional conditions.

More specifically, the framework discusses how the BLM and Forest Service will monitor and track implementation and effectiveness of planning decisions (e.g., tracking of waivers, modifications, and site-level actions). The two agencies will monitor the effectiveness of LUPA decisions in meeting management and conservation objectives. Effectiveness monitoring includes monitoring disturbance in habitats, as well as landscape habitat attributes. To monitor habitats, the BLM and Forest Service will measure and track attributes of occupied habitat, priority habitat, and general habitat at the broad scale, and attributes of habitat availability, patch size, connectivity, linkage/connectivity habitat, edge effect, and anthropogenic disturbances at the mid-scale. Disturbance monitoring will measure and track changes in the amount of sagebrush in the landscape and changes in the anthropogenic footprint, including changes in density of energy development. The framework also includes methodology for analysis and reporting for field offices, states, ranger districts, BLM districts, National Forests, and forest regions, including geospatial and tabular data for disturbance mapping (e.g., geospatial footprint of new permitted disturbances) and management action effectiveness.

The monitoring data will provide the indicator estimates for adaptive management. The BLM and Forest Service will adjust management decisions through an adaptive management process, and in accordance with applicable law.

### **2.5.3. Adaptive Management**

Adaptive Management is a decision process that promotes flexible resource management decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust resource management directions as part of an iterative learning process. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a ‘trial and error’ process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits. On February 1, 2008, the DOI published its Adaptive Management Implementation Policy (DOI 2008). The adaptive management strategy presented within this EIS complies with this policy.

In relation to the BLM and Forest Service’s National Greater Sage-Grouse Planning Strategy, adaptive management will help identify if GRSG conservation measures presented in this EIS contain the needed level of certainty for effectiveness. If principles of adaptive management are incorporated into a conservation measure (to ameliorate threats to a species), then there

is a greater likelihood that the conservation measure will be effective in reducing threats to that species. The following provides the adaptive management strategy for the Nevada and Northeastern California Greater Sage-Grouse Sub-region LUPA/EIS.

### **Adaptive Management and Monitoring**

This EIS contains a monitoring framework plan (**Appendix E**) which includes an effectiveness monitoring component. The agencies intend to use the data collected from the effectiveness monitoring to identify any changes in habitat conditions related to the goals and objectives of the plan and other range-wide conservation strategies (DOI 2004; Stiver et al. 2006; USFWS 2013a). When available from WAFWA and/or state wildlife agencies, information about population trends will be considered with effectiveness monitoring data (taking into consideration the lag effect response of populations to habitat changes [Garton et al. 2011]). The information collected through the monitoring framework plan outlined in **Appendix E** will be used by the BLM and Forest Service to determine when adaptive management hard and soft triggers (discussed below) are met.

### **Adaptive Management Plan**

The BLM and Forest Service will develop an adaptive management plan to provide certainty that unintended negative impacts on GRSG will be addressed before consequences become severe or irreversible and to provide regulatory certainty to the USFWS that appropriate action will be taken. This adaptive management plan will:

- Identify science-based soft and hard adaptive management triggers applicable to each population or subpopulation within the planning area
- Address how the multiple scale data from the Monitoring Framework Plan (**Appendix E**) will be used to gauge when adaptive management triggers are met
- Charter an adaptive management working group to assist with responding to soft adaptive management triggers

The State of Nevada is updating a plan to provide more details on changes to management actions as a result of the monitoring. The BLM will evaluate the state's monitoring and adaptive management plan to the extent possible.

### **Adaptive Management Triggers**

Adaptive management triggers are essential for identifying when potential management changes are needed in order to continue meeting GRSG conservation objectives. The BLM and Forest Service will use a continuum of trigger points (soft and hard triggers), which will enhance the BLM's and Forest Service's ability to effectively manage GRSG habitat. The soft and hard triggers that will be delineated in the adaptive management plan will (at a minimum):

- Be based upon the best available science
- Tied to the populations/demographics
- Take into account the importance of various seasonal habitat types
- Not be limited to a single time "window"

Soft triggers indicate when the BLM or Forest Service will consider adjustments to resource/resource use management. An adaptive management working group will help identify the causal factors as to what prompted the soft adaptive management trigger. The group will also provide recommendations to the appropriate BLM or Forest Service authorizing official (decision maker) regarding the applicable management response to address this trigger (e.g. effective mitigation, restoration, reclamation, and in some instances, a land use plan amendment or revision). When organizing the adaptive management working group, the BLM and Forest Service will invite participation from BLM, Forest Service, USFWS, local governments, and applicable state fish and game agencies.

Hard triggers indicate when the BLM/Forest Service will take immediate action to stop the continued deviation from conservation objectives. These actions could include one or more of the following (which may require subsequent NEPA analysis):

- Temporary closures (in accordance with 43 CFR Part 8364.1, and as directed under BLM Instruction Memorandum No. 2013-035)
- Immediate implementation of interim management policies and procedures through the BLM or Forest Service directives system
- Initiation of a new LUP Amendment to consider changes to the existing LUP decisions

## **2.6. Alternatives Eliminated from Detailed Analysis**

The following alternatives were considered but were not carried forward for detailed analysis because (1) they would not fulfill the requirements of FLPMA, NFMA or other existing laws or regulations, (2) they did not meet the purpose and need, (3) they were already part of an existing plan, policy, or administrative function, or (4) they did not fall within the limits of the planning criteria. FLPMA requires the BLM and Forest Service to manage the public lands and resources in accordance with the principles of multiple use and sustained yield.

### **2.6.1. Close All or Portions of Preliminary Priority or Preliminary General Management Areas to Off-Highway Vehicle Use**

Through this LUPA, the BLM has identified, but has not studied in detail, an alternative to designate new area closures for OHV use within PPMAs and/or PGMAs. However, as explained more fully below, the BLM has analyzed alternatives to designate all areas within PPMAs and PGMAs as “limited” to OHV use if not already closed by existing planning efforts. Further, subsequent Travel Management Plans will be developed to identify specific routes within limited areas that will be closed and eliminated in order to protect and conserve GRSG and its habitat. These plans should be completed within five years of the ROD. Finally, BLM has analyzed existing OHV area closures within PPMAs and PGMAs as part of the No Action alternative and as a decision common to all alternatives. The following provides the BLM’s rationale:

- There are areas within PPMAs and PGMAs that are currently closed to OHV use (e.g. Congressional designations, including Wilderness Areas). While these areas were closed to OHV use for purposes other than GRSG conservation, the BLM will analyze the impacts that these closures have on protection of GRSG and GRSG habitat. These closures are analyzed in the No Action alternative and will be carried forward across all alternatives in this LUPA/EIS.

- This LUPA/EIS is considering eliminating cross-country travel by analyzing limiting travel to existing roads and trails, as no new areas will be designated as open to OHV use. In at least one alternative, all existing areas that are designated as open will become limited.
- For BLM-administered lands in Nevada, routes in PPH and PGH are being inventoried, based on coordinated efforts between the BLM and USFWS staff. (Route inventories for BLM-administered lands in California and Forest Service-administered lands in both Nevada and California are complete.) Once the inventories are complete, the BLM will initiate travel and transportation planning, which will undergo a NEPA analysis and will include public involvement. Through subsequent travel and transportation planning, the BLM will identify and consider closing specific existing routes that may be affecting GRSG habitat. Any decision to close routes to OHV use in the travel and transportation plans would be based on consideration of the habitat objectives and the overall goal of conserving, enhancing, and/or restoring sagebrush ecosystems upon which GRSG populations depend.
- Each District in the Humboldt-Toiyabe National Forest has completed its travel management plans. This included inventorying, notifying the public, and complying with NEPA. The travel management analyses disclosed the effects on GRSG. The decisions identified which travel routes are open to vehicle use and which routes are being closed to public motorized vehicles.
- During the LUP revision/amendment process, travel and transportation area decisions (open, limited, or closed) would be revisited at the local level based on existing inventory information associated with a myriad of resources and resource uses.
- During the public scoping period for this LUPA, there were no specific areas identified for closure to carry forward for detailed analysis.

For the reasons identified above, this subject was not carried forward for detailed analysis.

## **2.6.2. Elko County Sage-Grouse Plan**

Elko County, Nevada has developed an approach for conservation of the GRSG (Elko County 2012). The plan emphasizes the need to maintain the multi-use concept and to avoid further restrictive federal policies for the purpose of the conservation of the GRSG. The goals of the plan “are not only to conserve, protect and restore GRSG populations and habitat it is also to protect the rights of the citizens and the multiple use concept that has been the heritage and culture of this region prior to the inception of the BLM, Forest Service, and USFWS as federal land managers.” The plan questions the rationale and science used by the USFWS in their determination regarding the status of GRSG. To resolve this disagreement, the Elko Plan identifies the need for “Pilot Programs” to be implemented so as to determine the actual resource impacts on GRSG. The Elko Plan identifies a suite of ‘Action Items’ by program areas to resolve current issues associated with the conservation of the GRSG. The plan also identifies the need for a financial incentive plan to compensate users of public lands for potential adjustments in their management.

The Elko Plan was not analyzed as a separate alternative because:

- Most of the Actions Items are contained in either Alternatives A, D, or E.
- The results of the Pilot Program would be appropriate to include in the adaptive management program; however, the Pilot Program would not provide sufficient certainty to conserve,

enhance, and restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat.

- Several of the Action Items are outside the scope of this decision, such as:
  - Offering private landowners incentives when and where appropriate to achieve GRSG habitat objectives
  - Discouraging and preventing additional regulations and prohibitions and limiting and preventing livestock grazing and agricultural uses on federally managed lands and private properties
  - Using NDF Conservation Camp Crews for fuels reduction projects and to support a federal grant
  - Expanding authorizations to include fire restoration projects under NEPA Categorical Exclusion provisions
  - Identifying funding opportunities from federal, state, local, industry, and land users dedicated to implementing prioritized habitat enhancement, restoration, and conservation

### **2.6.3. Increased Grazing Alternative**

During scoping and the alternatives development process, a number of individuals and cooperating agencies requested that the BLM and Forest Service consider an alternative that would increase the amount of livestock grazing in GRSG habitat. This recommendation was based on empirical evidence that shows there could be a correlation between declines in GRSG and declines in the amount of livestock grazing on public lands. This alternative was considered but eliminated from detailed analysis for the following reasons:

- Alternatives being considered in this LUPA/EIS are science-based conservation measures that would meet the purpose and need for the project, which is to identify and incorporate appropriate conservation measures in LUPs to conserve, enhance, and restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. There are currently no science-based studies that demonstrate that increased livestock grazing on public lands would enhance or restore GRSG habitat or maintain or increase GRSG abundance and distribution.
- Actual livestock use within GRSG habitat on BLM-administered lands in the Nevada and Northeastern California Sub-region is generally less than permitted active use. For example, in 2011 actual livestock use was approximately 60 percent of permitted active use. Unless current actual use levels are tied specifically to GRSG habitat management, permitted active use could increase under current grazing permits.

## **2.7. Considerations for Selecting a Preferred Alternative**

The proposed alternatives offer a range of discrete strategies for resolving deficiencies in existing management, exploring opportunities for enhanced management, and addressing issues identified through internal assessment and public scoping to maintain or increase GRSG abundance and distribution on BLM- and Forest Service-administered lands. Comments submitted by other federal, state, and local government agencies, public organizations, tribal entities, and interested individuals were given careful consideration. Public scoping efforts enabled the BLM and Forest

Service to identify and shape significant issues pertaining to GRSG habitat, energy development, livestock grazing, potential ACECs, public land access, and other program areas. Cooperating agencies reviewed and provided comments at critical intervals during the alternative development process.

The BLM's planning regulations and the NEPA regulations developed by the CEQ require the BLM and Forest Service to identify a preferred alternative in the draft LUPA/EIS if one has been identified by the lead agency at that stage. Formulated by the planning team, the preferred alternative represents those goals, objectives, and actions determined to be most effective at resolving planning issues and balancing resource use at this stage of the process. While collaboration is critical in developing and evaluating alternatives, the final designation of a preferred alternative remains the exclusive responsibility of the BLM and Forest Service.

Alternative D is the BLM and Forest Service's Preferred Alternative. The agencies selected the preferred alternative based on meeting the purpose and need, the agencies' multiple use mission, interdisciplinary team recommendations, environmental consequences analysis of the alternative, and Cooperating Agency comments provided on the Administrative Draft EIS. Based on public/agency/tribal comments on the DEIS, the BLM and Forest will make the final selection of the Preferred Alternative, which may include elements of other alternatives.

## **2.8. Comparison of Alternatives**

This section compares the six alternatives (Alternatives A through F) considered in the EIS.

### **2.8.1. No Action Alternative**

The No Action Alternative represents the continuation of present management for all the sub-regional LUPs considered in this programmatic LUPA. The No Action Alternative provides the baseline against which to compare other action alternatives and their impacts on resources and resource uses. The No Action Alternative is required by CEQ regulations implementing NEPA (40 CFR Parts 1500-1508). The No Action Alternative is not required to meet the agency purpose and need and must be assessed in an EIS as a basis for comparison.

The LUPs included in this programmatic amendment were developed and approved between 1982 and 2008. These LUPs (which include BLM RMPs, BLM relic MFPs, and Forest Service LRMPs) collectively provide a varying range of goals, objectives, plan decisions, and allocations that reflect the issues at the time of their development (see **Table 2-2**, Land Use Plans Considered in the No Action Alternative). The No Action Alternative would continue implementing management decisions and agency policies under the current approved LUPs within the Nevada and Northeastern California planning area. Direction contained in existing statutes, regulations and policies would also continue to be implemented and may at times supplement provisions in existing LUPs.

Overall, the No Action Alternative highlights those decisions that can be shown to have a direct effect or link to conserving or restoring GRSG habitat or sagebrush vegetation communities that support GRSG throughout its life cycle. These include goals, objectives, management actions, allocations (see **Table 2-3**, Comparative Allocation Summary of Alternatives), prescriptions, BMPs, RDFs, and standard operating procedures. For purposes of cross-walking the management actions contained in the No Action Alternative to the NTT Report, the management actions have

been organized by the threat factors identified in the NTT Report as outlined by the USFWS in its March 2010 Listing Decision. In addition to the threat factors, several other programs or other areas of resource emphasis are included (e.g., Special Designations, Vegetation - Sage Steppe Vegetation Communities and Sage-Grouse Monitoring, and Vegetation - Woodlands). Because there are few management decisions that are common to all 13 LUPs, a summary of the general management per threat is discussed.

**Table 2.2. Land Use Plans Considered in the No Action Alternative**

Plan Name	Plan Type	Approval Date	District Office
Elko	RMP	March 11, 1987	Elko
Wells	RMP	July 16, 1985	Elko
Paradise-Denio <sup>1</sup>	MFP	August 6, 1982	Winnemucca
Sonoma-Gerlach <sup>1</sup>	MFP	August 6, 1982	Winnemucca
Black Rock National Conservation Area (NCA)	RMP	July 15, 2004	Winnemucca
Carson City Consolidated <sup>2</sup>	RMP	May 9, 2001	Carson City
Ely	RMP	August 20, 2008	Ely
Shoshone-Eureka	RMP	February 26, 1986	Battle Mountain
Tonopah	RMP	October 6, 1997	Battle Mountain
Alturas	RMP	April 17, 2008	Northern California
Eagle Lake	RMP	April 17, 2008	Northern California
Surprise	RMP	April 17, 2008	Northern California
Humboldt National Forest	LRMP	August 19, 1986	Forest Service
Toiyabe National Forest	LRMP	June 23, 1986	Forest Service
<sup>1</sup> MFP Conversion to RMP in Progress			
<sup>2</sup> Includes the Lahontan RMP (1985) and Walker RMP (1986)			

### Special Status Species/Greater Sage-Grouse Habitat

Under the No Action Alternative, there are no public lands designated by the BLM or the Forest Service as PPH or PGH within the sub-regional planning area. The LUPs do not contain special designations pertaining to managing GRSG, such as GRSG “Core Areas” or “Priority Habitat” or other types of references to relative habitat quality. In 2004, NDOW released the *Greater Sage-grouse Conservation Plan for Nevada and Eastern California* (NDOW 2004b). Through this plan, NDOW identified and delineated Population Management Units across the state for management, inventory, and mapping purposes. The conservation plan also directed the creation of local working groups along these general PMU boundaries. Based on the best available information, the GRSG local working groups refined the PMU boundaries and established goals and objectives for individual PMU conservation plans.

The BLM and Forest Service use the State of Nevada PMU boundaries as management units for GRSG conservation. In the BLM’s more recently completed LUPs and those currently under revision, however, these are not allocative designations, but rather are identified only to focus management attention on the area. Within the sub-region, all BLM and Forest Service offices work closely with their state wildlife agency to maintain current maps of GRSG habitat on the BLM- and Forest Service-administered lands. General habitat maps of GRSG breeding, brood-rearing, and wintering habitat or an inventory of known lek distribution may be included in some of the more recent LUPs for reference purposes and to guide specific management actions and lease stipulations contained within the LUP as they pertain to managing GRSG habitat.

## Greater Sage-Grouse Habitat Monitoring

By policy, the BLM conducts land health assessments and monitoring for a variety of resource programs, including livestock grazing, wild horse and burro use, wildlife, wildfire restoration, and vegetation condition as well as riparian condition, soils, and hydrologic function.

Within the Nevada and Northeast California Sub-region, there are no consistent guidelines in place that specifically require the monitoring of GRSg habitat condition. Monitoring that occurs in this type of habitat is associated with monitoring and meeting the objectives of other resource programs. The Forest Service LRMPs established Management Indicator Species and identifies the range of population needed to maintain species viability. GRSg have been identified by the Forest Service as a management indicator species.

## Habitat Restoration/Vegetation Management

### *Sagebrush Plant Communities*

Within the sub-region, all LUPs contain some level of management direction for managing sagebrush vegetation communities and habitat. Most LUPs contain general objectives for maintaining or improving sagebrush plant communities. Key aspects of this direction vary from implementing restrictions on sagebrush removal associated with resource use developments to implementing proactive sagebrush community restoration activities following the Western States Sage-grouse Guidelines. Habitat management is generally conducted with an emphasis on protecting GRSg leks as well as nesting and brood-rearing habitat during any proposed activity. Across the sub-region, lek buffers are maintained at two miles per the guidance and policies in place at the time the plan was developed.

Specific vegetation treatment projects are implemented through other range, wildlife, or vegetation management programs that seek to improve habitat for big and small game species including GRSg and its habitat. In many cases the habitat requirements for other species overlap with that of GRSg in the context of the overall goals and objectives for wildlife habitat in general or for other species.

The California RMPs have adopted the Sage Steppe Ecosystem Restoration Strategy Final EIS (BLM 2008f). This document provides guidance and management for restoring sagebrush plant communities that have become dominated by western juniper. The Sage Steppe Ecosystem Restoration Strategy specifically states “restore habitat for sagebrush obligate species,” which includes woodland habitat.

### *Woodlands*

Most of the sub-region share some level of woodland vegetation component with habitat occupied by GRSg. This woodland vegetation component is mostly pinyon and juniper in central and eastern Nevada, to mostly juniper in northern Nevada and the northeast California sub-region where pinyon is scarce or not present. All BLM and Forest Service LUPs in the sub-region address woodland management in terms of providing public access to, and use of, woodland products and include goals and objectives to this effect. Woodland products may range from personal, commercial, or contract fuel wood cutting and biomass production to posts, pinyon nut harvesting, and Christmas trees. In some cases, management direction may highlight encroachment areas for targeted fuel wood and post cutting to reduce the effects of encroachment on these other habitats.



Within the BLM's Nevada side of the sub-region, there are no BLM LUP goals, objectives, or management actions that specifically address protection or conservation of GRSG habitat within the management framework for woodland products. As stated previously under sagebrush plant communities, the California BLM follows the Sage Steppe Ecosystem Restoration Strategy. It provides guidance and management for the restoration of sagebrush plant communities that have become dominated by western juniper. The Humboldt National Forest LRMP outlines that fuel wood harvesting policy will reflect the needs of wildlife.

### *Integrated Invasive Species Management*

One of the primary threats in the western range of the GRSG identified by the USFWS is the threat of habitat degradation through increased presence of invasive species and noxious weeds. The BLM and Forest Service have followed an invasive and noxious species management program as a matter of agency policy since 1995. Inventories are recorded and maintained in the National Invasive Species Information Management System database, and invasive and noxious weeds are routinely addressed when permitting public land uses, including applying mitigation measures. The BLM also manages certain areas in partnerships with other agencies and organizations through Cooperative Weed Management Areas (CWMAs), which focus attention and shared resources on specific areas.

The BLM and Forest Service have authorized the use of specific herbicides on public lands and developed standard operating procedures and mitigation measures for all treatment methods for addressing invasive and noxious weeds in project approval or habitat and vegetation restoration projects (BLM 2007a; Forest Service 2004).

Within the sub-region, with the exception of the California BLM field offices, there are no LUP goals, objectives, or management actions identified specifically for addressing protection or conservation of GRSG habitat within the management framework of the invasive and noxious weed management program.

The northeastern California RMPs have identified herbicide use restrictions and application guidance specific to herbicide applications near GRSG leks, lek complex-associated habitats, and nesting and brood-rearing habitat.

### *Vegetation Treatments*

Vegetation treatments are discussed in the Sagebrush Plant Communities subsection, above. Within the sub-region, all LUPs contain some level of management direction for managing sagebrush vegetation communities and habitat. Most LUPs contain general objectives for maintaining or improving sagebrush plant communities. All LUPs address vegetation treatments for improvement of wildlife habitat overall or to provide increased forage for livestock, wildlife, and wild horses and burros. The level of detail for specific objectives and management actions regarding vegetation treatments in sagebrush communities for the purpose of improving GRSG habitat varies depending on the age of the LUP.

### **Wild Horses and Burros**

Within the sub-region, the BLM and Forest Service districts manage for wild horses and burros within established herd areas (HAs), herd management areas (HMAs), or wild horse and burro territories (WHBTs; Forest Service). Most HAs and HMAs contain GRSG habitat within a sagebrush vegetation community. Overall management direction is to manage for healthy

populations of wild horse and burros to achieve a thriving natural ecological balance with respect to wildlife, livestock grazing, and other multiple uses. All HAs and HMAs (or Forest Service WHBTs) are managed for appropriate management level (AML). Initially, AML is established in LUPs at the outset of planning and is adjusted based on monitoring data throughout the life of the plan. Priorities for gathering horses to maintain AML are based on population inventories, gather schedules, resource conditions, and budget. Gathers are also conducted in emergency situations when the health of the population is at risk for lack of forage or water. Direction for prioritizing horse gathers and maintaining AML is not based on GRSG habitat needs, although this is implicit in the Congressional directive to maintain a thriving natural ecological balance. Under the No Action Alternative, there are no goals, objectives, or management actions specifically identified within the management framework for the Wild Horse and Burro program.

### **Fire Management**

Within the sub-region, all LUPs address fire suppression and fuels management. Each LUP supports the development and adherence to a more detailed fire management plan that outlines priorities and levels of suppression for particular vegetation classes, or resource protection. Most plans support objectives of re-introducing fire into fire-dependent ecosystems and utilize the Fire Regime Condition Class (FRCC) framework to aid in prioritizing response to wildfires and determining where fire can be used for resource benefit. Most plans place priority for suppression on the protection of life and property, followed by important resource values. The more recent LUPs (2008) contain specific objectives and management actions for suppression and management of fires within sagebrush vegetation communities and GRSG habitat, in accordance with local PMU conservation strategies and those outlined in IM 2013-128.

### **Livestock Grazing/Range Management**

All LUPs provide for the management of rangeland resources and land health standards through the livestock grazing program. The Nevada LUPs do not contain management guidance for permitted livestock grazing specific to conserving GRSG habitat. The California LUPs contain specific management actions for permitted livestock grazing in accordance with local GRSG PMU conservation strategies. Land health conditions and wildlife habitat are monitored and/or assessed as part of the grazing management program. The BLM sets animal unit months (AUMs), season of use, and grazing management strategies through the permit renewal process and adjusts these as needed to meet resource objectives. Some grazing allotments have Allotment Management Plans (AMPs); however, in Nevada forage is allocated based upon the multiple use decision process that takes into consideration forage availability for livestock, wild horses, and wildlife. All districts and field offices are subject to meeting the standards for rangeland health following the guidelines for livestock grazing. The California LUPs (2008) contain specific management actions for managing livestock grazing in sagebrush ecosystems and consider GRSG habitat needs in authorizing levels of grazing use.

The Humboldt and Toiyabe LRMPs established specific utilization standards for livestock grazing. These standards have been incorporated into the Term Grazing Permits and are referenced in the Annual Operating Instructions each year.

### **Recreation**

Within the sub-region, the BLM and Forest Service manage for developed and dispersed recreation. Several plans identify Special Recreation Management Areas (SRMAs) where recreation management is focused on managing for specific recreation activities such as OHV

paces or more dispersed passive uses such as group camping, wildlife watching, and sightseeing. Many of these SRMAs contain sagebrush vegetation communities and GRSG.

None of the LUPs contain goals, objectives, or management actions specific to management of GRSG habitat in terms of issuing SRPs or casual use. The Alturas and Eagle Lake RMPs provide for denial of SRPs for activities where adverse impacts cannot be mitigated by the applicant, if the proposed activity would conflict with recreation or resource management objectives, but GRSG are not specifically identified in relation to issuance or nonissuance of SRPs. The Surprise LUP places similar restrictions in SRPs as follows: “and other uses of special designations that require a special permit would be evaluated on a case-by-case basis. Proposals would be permitted, modified, or denied as required to protect resources and values.”

### **Comprehensive Travel and Transportation Management**

Travel management at the LUP level is expressed as allocations for areas that are “Open,” “Closed,” or “Limited” to OHV use. The Limited category is either expressed as “limited to designated routes” or “limited to existing roads and trails.” The category of “limited to existing roads and trails” is the basic travel restriction for travel management until detailed implementation-level planning is completed to designate routes for use or nonuse.

Within the Nevada and Northeast California Sub-region, all OHV categories are present. In general, plans implemented prior to 2008 are mostly “open” to OHV use within a district or field office planning area. Plans that have been developed or revised 2008 and later have changed the “Open” designation to “Limited” per BLM policy established in 2007.

Under current management, Travel Management Areas (TMAs) have not been consistently identified in LUPs beyond the basic allocations of Open, Closed, and Limited. The Ely RMP has identified TMAs based on watershed boundaries, consistent with the management direction of the RMP to manage all resources on a watershed basis.

Outside of these basic planning allocations, goals, objectives, and management actions specific to managing GRSG are not present in most LUPs. The Alturas, Eagle Lake, and Surprise RMPs contain direction for the use of designated routes, including several restrictions for protecting natural resources and/or preventing harassment of wildlife. The Alturas RMP contains seasonal closures in specific areas to protect GRSG nesting and brood-rearing habitats.

For Forest Service-administered lands, the Humboldt-Toiyabe National Forest has completed its Travel Management Plans. The agency designated specific areas as limited to existing or designated routes for motorized vehicle travel. The forest has published Motor Vehicle Use Maps, which display the specific routes designated for motor vehicle use.

### **Lands and Realty**

The lands and realty program processes ROWs and land tenure adjustments and manages utility corridors. The BLM lands and realty program also processes all federal withdrawal applications, including applications for withdrawal from mining law, regardless of federal land management jurisdiction, for recommendation to the Secretary of the Interior. Most LUPs in the sub-region do not contain specific goals, objectives, or management actions directly related to GRSG conservation. However, mitigation for GRSG habitat is typically developed during the site-specific NEPA process; most ROWs and surface developments are subject to stipulations or timing limitations developed for GRSG. Utility corridors exist in most LUPs. The more recent

(2008) LUPs in northeastern California identify specific avoidance areas and apply seasonal buffers and timing restrictions for ROWs that are within GRSG habitat. The Alturas, Eagle Lake, and Surprise RMPs identify specific exclusions and avoidance areas for ROWs that are within GRSG habitat. These LUPs set a buffer of 2 miles (3.2 kilometers) from a lek for new construction of overhead structures, such as transmission lines and towers, wind turbines, and communication towers.

All federal-, BLM-, and Forest Service-administered lands are held in retention unless identified for disposal. Disposal criteria typically include consideration of crucial wildlife habitat in general when identifying lands available for disposal under various authorities. Some LUPs and the Nevada GRSG Conservation Strategy identify objectives to acquire sensitive GRSG habitat or easements where appropriate or within PMUs. In general, public lands in the state of Nevada designated for potential disposal under Section 203 of FLPMA do not take into consideration excluding GRSG habitat from disposal (e.g., checkerboard lands). However, the northeastern California field offices follow PMU strategies, which state “BLM will not exchange or sell lands that have an active or inactive lek within them.”

### Utility Corridors

All the LUPs in the sub-region identify authorized utility corridor ROWs. Utility corridors in the LUPs represent a mix of existing ROW corridors and planning corridors. In addition, in 2008 at the direction of Congress and Section 368 of the Energy Policy Act of 2005, the BLM amended its LUPs through the West-Wide Energy Corridor Programmatic EIS and ROD and designated planning corridors for priority energy projects. This designation was broad in scope and did not necessarily consider GRSG conservation issues at the local level.

### Wind and Solar Energy (Renewable)

In 2005 and 2012, the BLM programmatically amended its LUPs for renewable energy resources through the Wind Energy Programmatic EIS (BLM 2005b) and the Solar Energy Program Programmatic EIS (BLM 2012h), respectively. These programmatic documents outline public lands available and unavailable for these resource uses, provide direction on processing wind and solar ROWs and establish BMPs for conducting these activities on public lands. The BMPs contain some general guidance for addressing GRSG and GRSG habitat. Wind and solar development are also subject to ROW restrictions.

## Minerals

### Leasable Minerals

Within the sub-region, all BLM LUPs contain fluid mineral lease stipulations for oil and gas and geothermal resources, as well as non-energy leasable minerals that occur within GRSG habitat. These stipulations range from NSO stipulations within 0.25 mile of a lek to appropriate seasonal timing limitations based on GRSG biology. Timing limitations vary by type of habitat (e.g., lek, brood-rearing, and winter) and are typically applied to a 2-mile (3.2-kilometer) buffer around leks. Older LUPs typically do not provide exception, modification, and waiver language. The more recent LUPs (i.e., Ely, Alturas, Eagle Lake, and Surprise RMPs) contain explicit exception, modification, and waiver language for each stipulation per BLM policy to address any special circumstances that would alter the lease stipulation requirements. Forest Service LUPs contain similar direction. Leasing on Forest Service-administered lands is done by the BLM after the Forest Service conducts appropriate environmental review and consents to leasing.

### *Locatable Minerals*

Within the sub-region, all lands are generally open to mineral location under the General Mining Act of 1872 (May 10, 1872, Ch. 152, 17 Stat. 19). There are specific locatable mineral withdrawals for particular ROWs, designated wilderness areas, ACECs, and other administrative needs. There are no locatable mineral withdrawals specific to protecting GRSG habitat. All locatable mineral activities are managed under the regulations at 43 CFR Part 3800 and 36 CFR Part 228. Mitigation of effects on GRSG and its habitat are identified through the NEPA process for approving plans of operation. Goals and objectives for locatable minerals provide opportunities to develop the resource while preventing undue or unnecessary degradation of public lands. Also, they minimize significant surface disturbance on Forest Service-administered lands.

### *Salable Mineral Materials*

Within the sub-region, most public lands are open to salable mineral material development. Disposal of mineral materials is discretionary. Specific closures of areas to salable mineral materials such as ACECs or crucial or essential wildlife habitat exist throughout the sub-region. Some LUPs contain use and development restrictions in terms of seasonal timing limitations in relation to GRSG habitat and leks, similar to oil and gas leasing; however, this is not consistent across the sub-region. Use and development restrictions are identified mostly in the more recent LUPs and use similar buffers (i.e., 2-mile [3.2-kilometer] buffers). No LUPs in the sub-region contain specific goals, objectives, or management actions relative to conservation or protection of GRSG beyond the use restrictions identified above.

### *Mineral Split Estate*

The majority of split-estate lands in the planning area are private surface and federal (subsurface) minerals. The split-estate lands in the sub-region contain GRSG habitat. Under the No Action Alternative, there are no goals, objectives, or management actions identified for activities on split-estate lands relative to protection and conservation of GRSG habitat. Mitigation of impacts from project activities and approvals to GRSG habitat is typically developed through the NEPA process for any project approval occurring in mineral split-estate lands. The Alturas RMP contains surface use and occupancy standards that also apply to split-estate lands.

## **Special Designations**

### *Areas of Critical Environmental Concern*

There are 70 designated ACECs covering 1,627,503 acres within the Nevada and Northeastern California Sub-region. Twenty-three of the 70 ACECs fall within PPH or PGH habitat. Of these 23 ACECs, only one in Surprise Field Office is designated specifically for managing for the protection or conservation of GRSG or its habitat. The primary purposes for ACEC designations are to protect unique historic, pre-historic, paleontological, or geological values and to protect special status or threatened and endangered botanical and faunal species and their habitat. Each of these ACECs has restrictions within the LUPs designed to protect the values for which the ACEC was designated. These restrictions include NSO stipulations, ROW exclusion or avoidance, and mineral withdrawal recommendations, as well as other use constraints. All public lands within an ACEC are held in retention. Outside of special designations, most lands are open to ROW development.

### *Wilderness Study Areas*

There are 56 WSAs designated within the Nevada and Northeast California Sub-region totaling 2,629,020 acres. Out of the 2,629,020 acres, 650,080 acres are within PPH and 170,220 acres are within PGH.

All WSAs are managed in accordance with FLPMA Section 603(c) so as not to impair the suitability of such areas for preservation as wilderness. These areas are also managed in accordance with BLM Manual 6330, Management of Wilderness Study Areas (BLM 2012d). WSAs released from further wilderness consideration are generally managed similar to the surrounding public lands unless a LUP specifically identifies that a different management direction be taken or provides for consideration of other special designations, such as status as an ACEC.

### **Resource Allocation by Alternative**

Management actions associated with each of the alternatives dictate how the BLM and Forest Service would manage GRSG habitat and allocate resources under each alternative. **Table 2-3**, Comparative Allocation Summary of Alternatives, provides a condensed version of allocations by resource area per alternative. The table uses PPH and PGH categories for Alternative A to facilitate comparison across the other alternatives. There are currently no lands designated by the BLM or Forest Service as PPH or PGH within the sub-regional planning area; therefore, selecting Alternative A would neither result in the designation of PPH or PGH nor assign additional management actions to PPH or PGH areas. As used for comparison in the table under Alternative A, for Nevada BLM- and Forest Service-administered lands, PPH is based on NDOW Category 1 and 2 habitat, while PGH is based on NDOW Category 3 habitat.

In California, the BLM used a mapping method based on the Doherty modeling (Doherty et al. 2011). Areas were modified by local knowledge of seasonal range use, known connectivity, and vegetative and natural barriers.

**Table 2.3. Comparative Allocation Summary of Alternatives**

<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
<b>GRSG Habitat/Management Areas</b>	<b>Figure 2-1</b>	<b>Figure 2-2</b>	<b>Figure 2-3</b>	<b>Figure 2-4</b>	<b>Figure 2-5</b>	<b>Figure 2-6</b>
Preliminary Priority Habitat (NDOW Category 1 and 2)	12,693,500 (existing habitat)	0	0	0	0	0
Preliminary General Habitat (NDOW Category 3)	5,039,400 (existing habitat)	0	0	0	0	0
Preliminary Priority Management Area (NDOW Category 1 and 2 for Alts B, D, and F and NDOW Category 1,2, and 3 for Alt C)	0	12,693,500	17,732,900	12,927,400	0	12,693,500
Preliminary General Management Area (NDOW Category 3)	0	5,039,400	0	4,805,500	0	5,039,400
SGMA-Occupied Habitat (NDOW Category 1 and 2)	0	0	0	0	10,655,300	0
SGMA-Suitable Habitat (NDOW Category 3)	0	0	0	0	2,295,500	0
SGMA-Potential Habitat (NDOW Category 4)	0	0	0	0	2,432,200	0
SGMA-Nonhabitat (NDOW Category 5)	0	0	0	0	522,600	0
<b>Wild Horses and Burros</b>	<b>Figure 2-7</b>	<b>Figure 2-7</b>	<b>Figure 2-7</b>	<b>Figure 2-8</b>	<b>Figure 2-9</b>	<b>Figure 2-7</b>
HAs within PPH, PPMA, or SGMA (occupied)	5,137,500	5,137,500	5,137,500	5,298,000	4,086,100	5,137,500
HAs within PGH, PGMA, or SGMA (suitable)	2,232,500	2,232,500	2,232,500	2,072,000	1,016,800	2,232,500
HMA within PPH, PPMA, or SGMA (occupied)	4,214,700	4,214,700	4,214,700	4,357,700	3,334,800	4,214,700
HMA within PGH, PGMA, or SGMA (suitable)	1,871,500	1,871,500	1,871,500	1,728,400	850,400	1,871,500
Wild Horse Territory within PPH, PPMA, or SGMA (occupied)	209,200	209,200	344,600	233,000	189,000	209,200

<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
Wild Horse Territory within PGH, PGMA, or SGMA (suitable)	135,400	135,400	0	111,600	38,100	135,400
<b>Livestock Grazing</b>	<b>Figure 2-10</b>		<b>Figure 2-11</b>			
Acres open for all classes of livestock grazing within PPH, PPMA, or SGMA (occupied)	12,572,300	12,572,300	0	12,838,200	10,580,900	12,572,300
Acres open for all classes of livestock grazing within PGH, PGMA, or SGMA (suitable)	4,979,300	4,979,300	0	4,751,500	2,259,900	4,979,300
Acres closed to all classes of livestock grazing because of overlap with PPH, PPMA, or SGMA (occupied)	0	0	17,732,900 acres of PPMA; 36,500,100 total acres	0	0	0
Acres closed to all classes of livestock grazing within PGH, PGMA, or SGMA (suitable)	0	0	0	0	0	0
<b>Comprehensive Travel and Transportation Management</b>	<b>Figure 2-12</b>	<b>Figure 2-13</b>	<b>Figure 2-14</b>	<b>Figure 2-15</b>	<b>Figure 2-16</b>	<b>Figure 2-13</b>
Closed to Motorized Vehicles within PPH, PPMA, or SGMA (occupied)	731,000	731,000	731,000	731,000	630,700	731,000
Closed to Motorized Vehicles within PGH, PGMA, or SGMA (suitable)	143,600	143,600	143,600	143,600	88,000	143,600
Limited to Existing Routes for Motorized Vehicles within PPH, PPMA, or SGMA (occupied)	3,083,600	11,962,500	11,962,500	12,052,800	9,998,200	12,693,500
Limited to Existing Routes for Motorized Vehicles within PGH, PGMA, or SGMA (suitable)	1,029,700	1,029,600	4,895,700	4,805,400	2,196,100	1,029,700
Open to Cross-Country Travel for Motorized Vehicles within PPH, PPMA, or SGMA (occupied)	8,878,900	0	0	0	0	0



<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
Open to Cross-Country Travel for Motorized Vehicles within PGH, PGMA, or SGMA (suitable)	3,866,100	3,866,100	0	0	0	3,866,100
<b>Lands and Realty</b>						
<b>Land Use Authorizations</b>	<b>Figure 2-17</b>	<b>Figure 2-18</b>	<b>Figure 2-19</b>	<b>Figure 2-20</b>	<b>Figure 2-21</b>	<b>Figure 2-22</b>
ROW exclusion areas within PPH, PPMA, or SGMA (occupied)	169,600	12,693,500	17,732,900	252,900	144,200	12,693,500
ROW exclusion areas within PGH PGMA or SGMA (suitable)	107,000	107,000	0	23,700	37,000	5,039,400
ROW avoidance areas within PPH, PPMA, or SGMA (occupied)	101,000	0	0	12,674,600	10,511,100	0
ROW avoidance areas within PGH, PGMA, or SGMA (suitable)	13,200	4,932,400	0	4,781,700	2,258,100	0
<b>Land Tenure</b>	<b>Figure 2-23</b>	<b>Figure 2-24</b>	<b>Figure 2-25</b>	<b>Figure 2-26</b>		<b>Figure 2-27</b>
Land no longer suitable for disposal within PPH, PPMA, or SGMA (occupied)	0	233,900	233,900	227,600	0	233,900 without exceptions for disposal to consolidate ownership that would be beneficial to GRSG
Land no longer suitable for disposal within PGH, PGMA, or SGMA (suitable)	0	0	101,800	108,800	0	0, without exceptions for disposal to consolidate ownership that would be beneficial to GRSG
<b>Wind Energy Development</b>	<b>Figure 2-28</b>	<b>Figure 2-28</b>	<b>Figure 2-28</b>	<b>Figure 2-29</b>	<b>Figure 2-30</b>	<b>Figure 2-31</b>

<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
ROW exclusion areas on BLM- and Forest Service-administered lands within PPH, PPMA, or SGMA (occupied)	169,600	169,600	276,600	12,927,400	144,200	12,693,500
ROW exclusion areas on BLM- and Forest Service-administered lands within PGH, PGMA, or SGMA (suitable)	107,000	107,000	0	4,805,500	37,000	5,039,400
ROW avoidance areas on BLM- and Forest Service-administered lands in PPH, PPMA, or SGMA (occupied)	101,000	101,000	114,200	0	10,511,100	0
ROW avoidance areas on BLM- and Forest Service-administered lands in PGH, PGMA, or SGMA (suitable)	13,200	13,200	0	0	2,258,100	0
<b>Utility-Scale Solar</b>	<b>Figure 2-32</b>	<b>Figure 2-32</b>	<b>Figure 2-33</b>	<b>Figure 2-34</b>	<b>Figure 2-35</b>	<b>Figure 2-32</b>
Solar energy ROW exclusion area within PPH, PPMA, or SGMA (occupied)	Not mapped because solar exclusions were not fully mapped in the Solar Programmatic EIS (PEIS)	Not mapped because solar exclusions were not fully mapped in the Solar PEIS	17,732,900	12,927,400	0	Not mapped because solar exclusions were not fully mapped in the Solar PEIS
Solar energy ROW exclusion area within PGH, PGMA, or SGMA (suitable)	Not mapped because solar exclusions were not fully mapped in the Solar PEIS	Not mapped because solar exclusions were not fully mapped in the Solar PEIS	0	4,805,500	0	Not mapped because solar exclusions were not fully mapped in the Solar PEIS
Solar energy ROW variance area within PPH, PPMA, or SGMA (occupied)	674,100	674,100	0	0	10,655,300	674,100
Solar energy ROW variance area within PGH, PGMA, or SGMA (suitable)	818,700	818,700	0	0	2,295,500	818,700

<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
<b>Fluid Mineral Leasing (oil and gas and geothermal)</b>	<b>Figure 2-36, Figure 2-44</b>	<b>Figure 2-37, Figure 2-41, Figure 2-45 Figure 2-49</b>	<b>Figure 2-38, Figure 2-46</b>	<b>Figure 2-39, Figure 2-42, Figure 2-47 Figure 2-50</b>	<b>Figure 2-43 Figure 2-51</b>	<b>Figure 2-40, Figure 2-48</b>
Closed to fluid mineral leasing within PPH, PPMA, or SGMA (occupied)	1,296,100	12,693,500	17,732,900	1,578,600	1,161,500	12,693,500
Closed to fluid mineral leasing within PGH, PGMA, or SGMA (suitable)	374,700	374,700	0	92,500	189,100	5,039,400
Open to fluid mineral leasing within PPH, PPMA, or SGMA (occupied)	11,397,200	0	0	11,348,800	9,493,800	0
Open to fluid mineral leasing within PGH, PGMA, or SGMA (suitable)	4,664,700	4,664,700	0	4,713,300	2,106,300	0
Open to fluid mineral leasing (oil and gas) and currently un-leased, with an NSO stipulation, and located within PPMA	No data available	No data available	No data available	10,333,600	N/A	No data available
Open to fluid mineral leasing (oil and gas) and currently un-leased, with an NSO stipulation plus modification waivers and exceptions and located within PGMA	No data available	No data available	No data available	4,187,900	N/A	No data available
Open to fluid mineral leasing (geothermal) and currently un-leased, with an NSO stipulation without modification waivers and exceptions, and located within PPMA	No data available	No data available	No data available	11,240,500	N/A	No data available

<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
Open to fluid mineral leasing (geothermal) and currently un-leased, with an NSO stipulation plus modification waivers and exceptions, and located within PGMA	No data available	No data available	No data available	4,652,200	N/A	No data available
Open to fluid minerals but requires application of the avoid, minimize and mitigation evaluation in SGMA (occupied)	N/A	N/A	N/A	N/A	9,493,800	N/A
Open to fluid minerals but requires application of the avoid, minimize and mitigation evaluation in SGMA (suitable)	N/A	N/A	N/A	N/A	2,106,300	N/A
<b>Locatable Minerals</b>	<b>Figure 2-52</b>	<b>Figure 2-53</b>	<b>Figure 2-54</b>	<b>Figure 2-55</b>	<b>Figure 2-56</b>	<b>Figure 2-53</b>
Petition for withdrawal from locatable mineral entry within PPH, PPMA, or SGMA (occupied)	1,296,100	12,693,500	17,732,900	1,578,600	1,161,500	12,693,500
Petition for withdrawal from locatable mineral entry within PGH, PGMA, or SGMA (suitable)	374,700	374,700	0	92,500	189,100	374,700
Open to locatable mineral exploration or development within PPH, PPMA, or SGMA (occupied)	11,397,200	0	0	11,348,800	9,493,800	0
Open to locatable mineral exploration or development within PGH, PGMA, or SGMA (suitable)	4,664,700	4,664,700	0	4,713,300	2,106,300	4,664,700
<b>Mineral Materials (Salables)</b>	<b>Figure 2-57</b>	<b>Figure 2-58</b>	<b>Figure 2-59</b>	<b>Figure 2-60</b>	<b>Figure 2-61</b>	<b>Figure 2-58</b>
Closed to mineral materials disposal within PPH, PPMA, or SGMA (occupied)	1,296,100	12,693,500	17,732,900	12,927,400	1,161,500	12,693,500

<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
Closed to mineral materials disposal within PGH, PGMA, or SGMA (suitable)	374,700	374,700	0	4,805,500	189,100	374,700
Open for consideration for mineral materials disposal within PPH, PPMA, or SGMA (occupied)	11,397,200	0	0	0	9,493,800	0
Open for consideration for mineral materials disposal within PGH, PGMA, or SGMA (suitable)	4,664,700	4,664,700	0	0	2,106,300	4,664,700
<b>Non-energy Leasable Minerals</b>	<b>Figure 2-62</b>	<b>Figure 2-63</b>	<b>Figure 2-64</b>	<b>Figure 2-65</b>	<b>Figure 2-66</b>	<b>Figure 2-63</b>
Closed to non-energy solid leasable mineral exploration and development within PPH, PPMA, or SGMA (occupied)	1,296,100	12,693,500	17,732,900	12,927,400	1,161,500	12,693,500
Closed to non-energy solid leasable mineral exploration and development within PGH, PGMA, or SGMA (suitable)	374,700	374,700	0	4,805,500	189,100	374,700
Open for consideration of non-energy solid leasable mineral exploration or development within PPH, PPMA, or SGMA (occupied)	11,397,200	0	0	0	9,493,800	0
Open for consideration of non-energy solid leasable mineral exploration or development within PGH, PGMA, or SGMA (suitable)	4,664,700	4,664,700	0	0	2,106,300	4,664,700
<b>Special Designations</b>						
<b>Areas of Critical Environmental Concern</b>	<b>Figure 2-67</b>	<b>Figure 2-67</b>	<b>Figure 2-68</b>	<b>Figure 2-67</b>	<b>Figure 2-67</b>	<b>Figure 2-69</b>

<b>BLM and Forest Service Resource or Resource Use (acres, rounded to the nearest one hundred acres)</b>	<b>Alternative A*</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>	<b>Alternative F</b>
<b>Resources</b>						
Existing ACECs and Outstanding Natural Areas (ONAs) on BLM- and Forest Service-administered land	531,000	531,000	531,000	531,000	531,000	531,000
Proposed ACECs and ONAs on BLM- and Forest Service-administered land	--	--	12,249,700	--	--	--
Proposed ACECS and sagebrush reserves on BLM- and Forest Service-administered land (NDOW-proposed ACECs were used as a proxy for sagebrush reserves)	--	--	--	--	--	1,473,300
Source: BLM and Forest Service GIS 2013						
*Alternative A displays existing habitat as PPH and PGH for comparison purposes only. The BLM and Forest Service are not designating habitat under this alternative.						

In California, the BLM used a mapping method based on the Doherty modeling (Doherty et al. 2011). This included the 100 percent breeding bird density core regions; in other words, all known active leks with appropriate buffering (6.4 kilometers [4 miles] for 25 percent and 50 percent kernels, 8.5 kilometers [5.3 miles] for 75 percent and 100 percent kernels). Areas were modified by local knowledge of seasonal range use, known connectivity, and vegetative and natural barriers.

## 2.8.2. Action Alternatives

Combined with the No Action Alternative narrative, appendices, and maps, **Table 2-4**, Description of Alternative Goals and Objectives, and **Table 2-5**, Description of Alternative Actions, highlight the differences among the alternatives relative to what they establish and where they occur.

### How to Read Tables 2-4 and 2-5

The following describes how **Tables 2-4** and **2-5** are written and formatted to show the LUP decisions proposed for each alternative.

Per Appendix C of BLM Land Use Planning Handbook H-1601-1, LUP decisions are broad-scale decisions that guide future land management actions and subsequent site-specific implementation decisions (BLM 2005a). LUP decisions fall into two categories, which establish the base structure for **Tables 2-4** and **2-5**: desired outcomes (goals and objectives), and allowable uses and actions to achieve these outcomes.

- Goals are broad statements of desired outcomes that usually are not quantifiable.
- Objectives identify specific desired outcomes for resources. Objectives may be quantifiable and measurable and may have established timeframes for achievement, as appropriate.
- Actions identify measures or criteria to achieve desired outcomes (i.e., objectives), including actions to maintain, restore, or improve land health.
- Allowable uses identify uses, or allocations, that are allowable, restricted, or prohibited on the public lands and mineral estate.

Stipulations (NSO and CSU, which fall under the allowable uses category) are also applied to surface-disturbing activities to achieve desired outcomes (i.e., objectives).

In general, only those resources and resource uses that have been identified as planning issues have notable differences between the alternatives.

Actions that are applicable to all alternatives are shown in one cell across a row. These particular objectives and actions would be implemented regardless of which alternative is ultimately selected.

Actions that are applicable to more than one but not all alternatives are indicated by either combining cells for the same alternatives, or by denoting those objectives or actions as the “same as Alternative 2,” for example.

In some cells, there is a “—” as a placeholder that indicates that there is no similar goal, objective or action to the other alternatives, or that the similar goal, objective or action is reflected in another management action in the alternative.

**Table 2.4. Description of Alternative Goals and Objectives**

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
<b>Special Status Species (Greater Sage-Grouse)</b>					
Goal A-SSS 1: No common goal across LUPs within the sub-region. See <b>Section 2.1.</b>	Goal B-SSS 1: Maintain and/or increase GRSG abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners.	Goal C-SSS 1: Same as Alternative A.	Goal D-SSS 1: Maintain and/or increase abundance and distribution of GRSG on BLM- and Forest Service-administered lands by conserving, enhancing, or restoring the sagebrush ecosystem upon which populations depend, in cooperation with other conservation partners.  Manage activities and authorizations on public lands to reduce predation of GRSG on public lands.	Goal E-SSS 1: The Nevada Sagebrush Ecosystem Council will work to achieve conservation through a goal of “no net loss” in the Occupied, Suitable and Potential Habitat categories within the sagebrush ecosystem for activities that can be controlled such as a planned disturbance or development. As a realistic, quantifiable goal, “no net loss” must be measured through effective mitigation monitoring over a number of years. Timeframes will be determined by the Nevada Sagebrush Ecosystem Council using the best available science.	Goal F-SSS 1: Maintain and increase current GRSG abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem.
Goal A-SSS 2: No common goal across LUPs within the sub-region. See <b>Section 2.1.</b>	Goal B-SSS 2: —	Goal C-SSS 2: —	Goal D-SSS 2: Manage activities and authorizations on public lands to reduce predation of GRSG on public lands.	<u>TMA-9:</u> Implement a predator control program to reduce transient raven populations for nest protection and increased chick survival throughout the interim period while habitat enhancement and restoration projects become established. GRSG population, nest success and recruitment goals should be established for all SGMAs (State of Nevada 2012).	Goal F-SSS 2: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>Focus on a six-point plan that is summarized here and expanded below.</p> <ol style="list-style-type: none"> <li>1. Control access to garbage dumps and landfills.</li> <li>2. Control access to road kill.</li> <li>3. Control access to abandoned animal carcasses.</li> <li>4. Control access to artificial nesting and roosting structures.</li> <li>5. Ensure adequate nesting cover for GRSG.</li> <li>6. Increase site-specific take of ravens.</li> </ol>	
Objective A-SSS 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS 1: —	Objective C-SSS 1: —	Objective D-SSS 1: Ensure that authorizations include stipulations and design features to reduce or eliminate opportunities to attract and provide nesting, cover, or perches for predators in PPMAs and PGMA.	Objective E-SSS 1: —	Objective F-SSS 1: —
Objective A-SSS 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS 2: —	Objective C-SSS 2: —	Objective D-SSS 2: —	Objective E-SSS 2: —	Objective F-SSS 2: Restore and maintain sagebrush steppe to its ecological potential in PPMA and PGMA.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-SSS 3: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS 3: —	Objective C-SSS 3: —	Objective D-SSS 3: Manage land resource uses to meet GRSG habitat objectives as described in Table 2-6.	Objective E-SSS 3: TMA-2.8: Continue to successfully treat existing areas of invasive vegetative that pose a threat to SGMAs through the use of herbicides, fungicides or bacteria to control cheatgrass and medusahead infestations.  TMA-7: Initiate landscape level treatments in SGMAs to reverse the effects of Pinyon-Juniper encroachment and restore healthy, resilient sagebrush ecosystems (State of Nevada 2012).  TMA-7.1: Inventory and prioritize areas for treatment of Phase I and Phase II encroachment in SGMAs to restore habitat resiliency, reduce avian predator perches, and increase forb and grass cover (State of Nevada 2012).  TMA-7.2: Aggressively implement plans to remove Phase I and Phase II encroachment and treat Phase III encroachment to reduce the threat of severe conflagration and restore SGMAs where possible, especially in areas in close proximity to Occupied and	Objective F-SSS 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>Suitable Habitat (State of Nevada 2012).</p> <p>TMA-7.3: Prioritize areas for treatment of Phase III Pinyon-Juniper encroachment in strategic areas to break up continuous, hazardous fuel beds. Treat areas that have the greatest opportunity for recovery to SGMAS based on ecological site potential. Old growth trees should be protected on woodland sites (State of Nevada 2012).</p> <p>TMA-8.1: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible (State of Nevada 2012).</p> <p>TMA-8.2 and 18.6: Site new linear features in existing corridors or, at a minimum, co-locate with existing linear features in SGMAs (State of Nevada 2012).</p> <p>TMA-8.4 and 18.3: Apply measures to deter raptor perching and raven nesting on elevated structures (State of Nevada 2012).</p> <p>TMA-12.2: Grazing management strategies for riparian areas should, at</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>a minimum, maintain or achieve riparian proper functioning condition (PFC). Specific management actions include riparian fencing to provide control of the season, duration or degree of herbivory, providing alternate water sources away from the riparian area, changing the grazing system, or other grazing management practices that promote herbage removal within acceptable limits (State of Nevada 2004).</p> <p>TMA-13: On BLM- and Forest Service-administered lands, meet the standards for riparian vegetation such as outlined in the various RAC S&amp;G for Ecological Health to meet the GRSG habitat requirements (State of Nevada 2004).</p>	
Objective A-SSS 4: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS 4: Protect PPMA from anthropogenic disturbances that will reduce distribution or abundance of GRSG.	Objective C-SSS 4: Same as Alternative A.	Objective D-SSS 4: Manage land and resource uses to conserve local GRSG populations, sagebrush communities and landscapes, and protect GRSG PPMA and PGMA from anthropogenic disturbances that would reduce distribution or abundance of GRSG.	<p>Objective E-SSS 4: The fundamental hierarchical decision-making policy of "Avoid, Minimize and Mitigate" will be followed:</p> <p>Avoid – Wherever possible, eliminate conflicts by relocating disturbance activities in order to conserve GRSG and their habitat.</p>	Objective F-SSS 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>Minimize – Modify proposed actions and develop permit conditions to include measures that lessen adverse effects on GRSG and their habitat to the furthest extent practical such as reducing the activity footprint, seasonal avoidance, co-location of structures, etc.</p> <p>Mitigate – Only after all appropriate and practicable avoidance and minimization measures have been taken, offset residual adverse effects in Occupied and Suitable Habitat by implementing additional actions that will result in replacement of an asset (mainly habitat) that will be lost as a result of a development action.</p>	
Sub-Objective A-SSS 1: No common sub-objective across LUPs within the sub-region. See <b>Section 2.1.</b>	Sub-Objective B-SSS 1: Designate GRSG PPMAs for each WAFWA management zone (Stiver et al. 2006) across the current geographic range of GRSG that are large enough to stabilize populations in the short term and enhance populations over the long term.	Sub-Objective C-SSS 1: —	Sub-Objective D-SSS 1: —	Sub-Objective E-SSS 1: SGMA's include Occupied Habitat, Suitable Habitat, Potential Habitat, and Non Habitat, as defined in the State of Nevada 2012 Plan. The Nevada Sagebrush Ecosystem Council – through field verifications and recommendations from the Nevada Sagebrush Ecosystem Technical Team based on the best available science – will further refine the habitat categories	Sub-Objective F-SSS 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				within the SGMAs. Also, it is understood that the final nomenclature for these habitat categories may vary.	
Sub-Objective A-SSS 2: No common sub-objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Sub-Objective B-SSS 2: To maintain or increase current populations, manage or restore priority areas so that at least 70% of the land cover provides adequate sagebrush habitat to meet GRSG needs.	Sub-Objective C-SSS 2: —	Sub-Objective D-SSS 2: Manage for no net unmitigated loss of PPMA and maintain or improve current habitat conditions to meet GRSG life history needs.	<p>Sub-Objective E-SSS 2: Management Strategy in Occupied/Suitable Habitat</p> <ul style="list-style-type: none"> <li>• Manage to avoid surface disturbance and habitat alteration to the greatest extent possible. If avoidance is not possible, disturbances greater than or equal to five percent of 640 acres (32 acres) within Occupied Habitat will trigger habitat evaluations and consultation with the Nevada Sagebrush Ecosystem Technical Team (see PMA-2).</li> <li>• Limit habitat treatments in winter ranges to actions that maintain or expand current levels of sagebrush available in winter.</li> <li>• Proactively monitor habitat and manage to ensure that it retains the attributes necessary to support viable GRSG populations.</li> </ul> <p>Management Strategy in Potential Habitat</p>	Sub-Objective F-SSS 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"><li>● Potential Habitat should be used for habitat enhancement and restoration to expand or restore Occupied or Suitable Habitat that has been adversely impacted either by acts of nature (e.g. wildfire and Pinyon-Juniper encroachment) or by human activities.</li><li>● Potential Habitat should be prioritized for enhancement and restoration based on data-driven models that incorporate ecological site potential and identify the highest priority sites with the greatest potential for success.</li></ul> <p>Management Strategy in Non-Habitat</p> <ul style="list-style-type: none"><li>● Use areas designated as Non Habitat within SGMAs to site activities that are not geographically restricted to specific resources.</li></ul> <p>Avoid undertaking habitat enhancement or restoration in Non Habitat areas with little or no potential for success.</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Sub-Objective A-SSS 3: No common sub-objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Sub-Objective B-SSS 3: Develop quantifiable habitat and population objectives with WAFWA and other conservation partners at the management zone and/or other appropriate scales. Develop a monitoring and adaptive management strategy to track whether these objectives are being met, and allow for revisions to management approaches if they are not.	Sub-Objective C-SSS 3: —	Sub-Objective D-SSS 3: —	<p>Sub-Objective E-SSS 3: SGMAs include Occupied Habitat, Suitable Habitat, Potential Habitat, and Non Habitat, as defined in the State of Nevada 2012. The Nevada Sagebrush Ecosystem Council – through field verifications and recommendations from the Nevada Sagebrush Ecosystem Technical Team based on the best available science – will further refine the habitat categories within the SGMAs. Also, it is understood that the final nomenclature for these habitat categories may vary.</p> <p>Management Strategy in Occupied/Suitable Habitat</p> <ul style="list-style-type: none"> <li>• Manage to avoid surface disturbance and habitat alteration to the greatest extent possible. If avoidance is not possible, disturbances greater than or equal to five percent of 640 acres (32 acres) within Occupied Habitat will trigger habitat evaluations and consultation with the Nevada Sagebrush Ecosystem Technical Team (see PMA-2).</li> <li>• Limit habitat treatments in winter ranges to</li> </ul>	Sub-Objective F-SSS 3: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>actions that maintain or expand current levels of sagebrush available in winter.</p> <ul style="list-style-type: none"><li>● Proactively monitor habitat and manage to ensure that it retains the attributes necessary to support viable GRSG populations.</li></ul> <p>Management Strategy in Potential Habitat</p> <ul style="list-style-type: none"><li>● Potential Habitat should be used for habitat enhancement and restoration to expand or restore Occupied or Suitable Habitat that has been adversely impacted either by acts of nature (e.g. wildfire and Pinyon-Juniper encroachment) or by human activities.</li><li>● Potential Habitat should be prioritized for enhancement and restoration based on data-driven models that incorporate ecological site potential and identify the highest priority sites with the greatest potential for success.</li></ul> <p>Management Strategy in Non-Habitat</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"> <li>● Use areas designated as Non Habitat within SGMAs to site activities that are not geographically restricted to specific resources.</li> <li>● Avoid undertaking habitat enhancement or restoration in Non Habitat areas with little or no potential for success.</li> </ul> <p>TMA-22: Positive outcomes of an effective adaptive management program are realized over the long-term.</p> <p>Through the Nevada Sagebrush Ecosystem Council, and its Nevada Sagebrush Ecosystem Technical Team, utilizing the “avoid, minimize and mitigate” strategy, the following will occur:</p> <p>TMA-22.1: Develop consistent monitoring protocols and methods to be used across all land jurisdictions and agencies. Compile all project monitoring data into one GRSG database managed by the Nevada Sagebrush Ecosystem Technical Team for use in</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>adaptive management and reporting (State of Nevada 2012).</p> <p>TMA-22.2: Monitoring of mitigation sites must be included in all plans, with consistent protocols to assess specific metrics and determine trends for habitat quantity/quality and GRSG populations (State of Nevada 2012).</p> <p>TMA-22.3: All statewide monitoring data will be accessible to the Nevada Sagebrush Technical Team through a centralized geographic database. The team will compile annual reports of habitat trends (State of Nevada 2012). All monitoring plans must include specific objectives and detailed procedures (State of Nevada 2004).</p> <p>TMA-22.4: Monitor GRSG activity and demographics with annual assessments and intensive levels of investigation to answer questions about the effectiveness of conservation strategies in terms of measured responses of key demographic parameters (e.g. nest success, chick survival, and movement)</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>associated with sites where management activities have been implemented (State of Nevada 2004).</p> <p>TMA-22.5: Conduct annual lek counts across most Population Management Units. Train volunteers who provide additional manpower in assisting with additional lek counts. Volunteers must be qualified by attending a day-long training session that includes actual field training each year (State of Nevada 2004).</p> <p>TMA-22.8: Population demographic data is determined from the GRSG harvest. Hunters shall deposit one wing from each bird harvested in wing barrels located on primary hunting access roads, check stations, or deliver it to a NDOW Field or Regional Office. Wings shall be separated by geographic locations (county or hunt area). Wings shall be used to identify sex, age, nest success, and number of chicks per hen. Monitoring objectives include 1) Expansion of the wing collection program to enhance the understanding of production of young in areas where GRSG are</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				hunted; 2) Collect and summarize wing count data on a PMU basis; and 3) Enhance the leg banding program in areas where GRSG are hunted to improve estimation of adult and juvenile survival using standard methods for analysis of band recovery data (State of Nevada 2004).	
Sub-Objective A-SSS 4: No common sub-objective across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Sub-Objective B-SSS 4: Manage GRSG PPMA's so that discrete anthropogenic disturbances cover less than 3% of the total GRSG habitat regardless of ownership. Anthropogenic features include but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells, geothermal wells and associated facilities, pipelines, landfills, homes, and mines.</p> <ul style="list-style-type: none"> <li>• In PPMA where the 3% disturbance threshold is already exceeded from any source, no further anthropogenic</li> </ul>	Sub-Objective C-SSS 4: —	Sub-Objective D-SSS 4: Implement program specific management actions to eliminate or minimize anthropogenic disturbances that threaten GRSG and its habitat.	<p>Sub-Objective E-SSS 4: The fundamental hierarchical decision-making policy of "Avoid, Minimize and Mitigate" will be followed:</p> <p><u>Avoid</u> – Wherever possible, eliminate conflicts by relocating disturbance activities in order to conserve GRSG and their habitat.</p> <p><u>Minimize</u> – Modify proposed actions and develop permit conditions to include measures that lessen adverse effects on GRSG and their habitat to the furthest extent practical such as reducing the activity footprint, seasonal avoidance, co-location of structures, etc.</p> <p><u>Mitigate</u> – Only after all appropriate and practicable avoidance</p>	Sub-Objective F-SSS 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>disturbances will be permitted by BLM or Forest Service until enough habitat has been restored to maintain the area under this threshold (subject to valid existing rights).</p> <ul style="list-style-type: none"> <li>• In this instance, an additional objective will be designated for the priority area to prioritize and reclaim/restore anthropogenic disturbances so that 3% or less of the total PPMA is disturbed within 10 years.</li> </ul>			and minimization measures have been taken, offset residual adverse effects in Occupied and Suitable Habitat by implementing additional actions that will result in replacement of an asset (mainly habitat) that will be lost as a result of a development action.	
Sub-Objective A-SSS 5: No common sub-objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Sub-Objective B-SSS 5: Quantify and delineate PGMA for capability to provide connectivity among priority areas (Knick and Hanser 2011).	Sub-Objective C-SSS 5: —	Sub-Objective D-SSS 5: Maintain or improve connectivity to and within PPMA to promote movement and genetic diversity for population persistence and expansion.	<p>Sub-Objective E-SSS 5: Management Strategy in Occupied/Suitable Habitat</p> <ul style="list-style-type: none"> <li>• Manage to avoid surface disturbance and habitat alteration to the greatest extent possible. If avoidance is not possible, disturbances greater than or equal to five percent of 640 acres (32 acres) within Occupied Habitat will trigger habitat evaluations</li> </ul>	Sub-Objective F-SSS 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>and consultation with the Nevada Sagebrush Ecosystem Technical Team (see PMA-2).</p> <ul style="list-style-type: none"> <li>• Limit habitat treatments in winter ranges to actions that maintain or expand current levels of sagebrush available in winter.</li> <li>• Proactively monitor habitat and manage to ensure that it retains the attributes necessary to support viable GRSG populations.</li> </ul> <p>Management Strategy in Potential Habitat</p> <ul style="list-style-type: none"> <li>• Potential Habitat should be used for habitat enhancement and restoration to expand or restore Occupied or Suitable Habitat that has been adversely impacted either by acts of nature (e.g. wildfire and Pinyon-Juniper encroachment) or by human activities.</li> <li>• Potential Habitat should be prioritized for enhancement and restoration based on data-driven models that incorporate ecological site potential and</li> </ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>identify the highest priority sites with the greatest potential for success.</p> <p>Management Strategy in Non-Habitat</p> <ul style="list-style-type: none"> <li>● Use areas designated as Non Habitat within SGMAs to site activities that are not geographically restricted to specific resources.</li> </ul> <p>Avoid undertaking habitat enhancement or restoration in Non Habitat areas with little or no potential for success.</p>	
Sub-Objective A-SSS 6: No common sub-objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Sub-Objective B-SSS 6: Conserve, enhance or restore GRSG habitat and connectivity (Knick and Hanser 2011) to promote movement and genetic diversity, with emphasis on those GRSG occupied habitat.	Sub-Objective C-SSS 6: —	Sub-Objective D-SSS 6: Maintain or improve connectivity to and within PGMA to promote movement and genetic diversity for population persistence and expansion.	<p>Sub-Objective E-SSS 6: The fundamental hierarchical decision-making policy of "Avoid, Minimize and Mitigate" will be followed:</p> <p><u>Avoid</u> – Wherever possible, eliminate conflicts by relocating disturbance activities in order to conserve GRSG and their habitat.</p> <p><u>Minimize</u> – Modify proposed actions and develop permit conditions to include measures that lessen adverse effects on GRSG and their habitat to the furthest extent practical</p>	Sub-Objective F-SSS 6: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>such as reducing the activity footprint, seasonal avoidance, co-location of structures, etc.</p> <p><u>Mitigate</u> – Only after all appropriate and practicable avoidance and minimization measures have been taken, offset residual adverse effects in Occupied and Suitable Habitat by implementing additional actions that will result in replacement of an asset (mainly habitat) that will be lost as a result of a development action.</p>	
<p>Sub-Objective A-SSS 7: No common sub-objective across LUPs within the sub-region. See <b>Section 2.1</b>.</p>	<p>Sub-Objective SSS 7: Assess PGMA to determine potential to replace lost PPMA caused by perturbations and/or disturbances and provide connectivity (Knick and Hanser 2011) between priority areas.</p> <ul style="list-style-type: none"> <li>• These habitats should be given some priority over other PGMA that provide marginal or substandard GRSG habitat.</li> <li>• Restore historical habitat functionality to support GRSG</li> </ul>	<p>Sub-Objective C-SSS 7: —</p>	<p>Sub-Objective D-SSS 7: —</p>	<p>Sub-Objective E-SSS 7: Management Strategy in Potential Habitat</p> <ul style="list-style-type: none"> <li>• Potential Habitat should be used for habitat enhancement and restoration to expand or restore Occupied or Suitable Habitat that has been adversely impacted either by acts of nature (e.g. wildfire and Pinyon-Juniper encroachment) or by human activities.</li> <li>• Potential Habitat should be prioritized for enhancement and restoration based on data-driven models that incorporate ecological site potential and</li> </ul>	<p>Sub-Objective F-SSS 7: —</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>populations guided by objectives to maintain or enhance connectivity. Total area and locations will be determined at the LUP level.</p> <ul style="list-style-type: none"> <li>Enhance PGMA such that population declines in one area are replaced elsewhere within the habitat.</li> </ul>			<p>identify the highest priority sites with the greatest potential for success.</p> <p>TMA-21.1: The Nevada Sagebrush Ecosystem Mitigation Bank Program will be facilitated through the Nevada Sagebrush Ecosystem Council and staffed by the Nevada Sagebrush Ecosystem Technical Team. By establishing this central mitigation bank, the State of Nevada will have a system that provides for consistent evaluation, monitoring and reporting of progress on mitigation efforts (State of Nevada 2012).</p> <p>TMA-21.4: Mitigation should generally involve creation of habitat, restoration of habitat, long-term preservation of existing habitat, or enhancement of habitat to compensate for the unavoidable or residual adverse impacts of habitat disturbance. Efforts will be made to accomplish this at a landscape level (State of Nevada 2012.)</p>	
Adaptive management					

<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E*</b>	<b>Alternative F</b>
Goal A-SSS-AM 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-SSS-AM 1: —	Goal C-SSS-AM 1: —	Goal D-SSS-AM 1: Ensure additional PPMA and PGMA is identified based upon new science, monitoring of PPMA and PGMA.	Goal E-SSS-AM 1: See Role of Sagebrush Ecosystem Technical Team.  TMA-22: Positive outcomes of an effective adaptive management program are realized over the long-term.	Goal F-SSS-AM 1: —
Goal A-SSS-AM 2: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B- SSS-AM 2: —	Goal C-SSS-AM 2: —	Goal D-SSS-AM 2: Promote a collaborative and integrated approach to GRSG conservation among federal, tribal, state, and county agencies, as well as private landowners and organizations, permit holders and other public land users.	Goal E-SSS-AM 2: See Role of Sagebrush Ecosystem Technical Team.	Goal F-SSS-AM 2: —
Objective A-SSS-AM 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS-AM 1: —	Objective C-SSS-AM 1: —	Objective D-SSS-AM 1: In PPMA where large scale disturbance has occurred, manage adjoining PGMA as PPMA.	Objective E-SSS-AM 1: <u>TMA-22.1</u> : Develop consistent monitoring protocols and methods to be used across all land jurisdictions and agencies. Compile all project monitoring data into one GRSG database managed by the Nevada Sagebrush Ecosystem Technical Team for use in adaptive management and reporting.	Objective F-SSS-AM 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-SSS-AM 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS-AM 2: —	Objective C-SSS-AM 2: —	Objective D-SSS-AM 2: Identify and implement additional GRSG conservation actions that can augment, enhance, and/or integrate program conservation measures established in agency and state land use and policy plans.	Objective E-SSS-AM 2: See Role of Sagebrush Ecosystem Technical Team.	Objective F-SSS-AM 2: —
Disease					
Goal A-SSS-D 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-SSS-D 1: —	Goal C-SSS-D 1: —	Goal D-SSS-D 1: Manage activities and authorizations on public lands to minimize opportunities to establish or enable disease vectors that could affect GRSG populations.	Goal E-SSS-D 1: See Role of Sagebrush Ecosystem Technical Team.	Goal F-SSS-D 1: —
Objective A-SSS-D 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B- SSS-D 1: —	Objective C-SSS-D 1: —	Objective D-SSS-D 1: Monitor trends in West Nile Virus spread within the sub-region to determine if mitigation or additional RDFs need to be applied to use authorizations.	Objective E-SSS-D 1: See Role of Sagebrush Ecosystem Technical Team. <b>13:</b> Appropriate state and federal agencies will continue to coordinate with the US Geological Survey (USGS), Biological Resources Division and associated National Wildlife Health Center to conduct investigations into the effects of West Nile virus and other disease pathogens on GRSG.	Objective F- SSS-D 1: —
<i>Administrative Collaboration and decision making</i>					

<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E*</b>	<b>Alternative F</b>
Goal A-SSS-ACDM 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-SSS-ACDM 1: —	Goal C-SSS-ACDM 1: —	Goal D-SSS-ACDM 1: —	Goal E-SSS-ACDM 1: The Nevada Sagebrush Ecosystem Council will work to achieve conservation through a goal of “no net loss” in the Occupied, Suitable and Potential Habitat categories within the sagebrush ecosystem for activities that can be controlled such as a planned disturbance or development.	Goal F-SSS-ACDM 1: —
Objective A-SSS-ACDM 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS-ACDM 1: —	Objective C-SSS-ACDM 1: —	Objective D-SSS-ACDM 1: —	Objective E-SSS-ACDM 1: Follow the fundamental hierarchical decision-making policy of "Avoid, Minimize and Mitigate."	Objective F-SSS-ACDM 1: —
Objective A-SSS-ACDM 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS-ACDM 2: —	Objective C-SSS-ACDM 2: No similar objective.	Objective D-SSS-ACDM 2: —	Objective E-SSS-ACDM 2: The Nevada Sagebrush Ecosystem Council – through field verifications and recommendations from the Nevada Sagebrush Ecosystem Technical Team based on the best available science – will further refine the habitat categories within the SGMAs. SGMAs include Occupied Habitat, Suitable Habitat, Potential Habitat, and Non Habitat, as defined in the State of Nevada 2012 Plan.	Objective F-SSS-ACDM 2: —
Opportunities for Proactive Measures					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Goal A-SSS-OPM 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-SSS-OPM 1: —	Goal C-SSS-OPM 1: —	Goal D-SSS-OPM 1: Promote a collaborative and integrated approach to GRSG conservation among federal, tribal, state, and county agencies, as well as private landowners and organizations, permit holders and other public land users.	Goal E-SSS-OPM 1: See role of Sagebrush Ecosystem Council.	Goal F-SSS-OPM 1: —
Objective A-SSS-OPM 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SSS-OPM 1: —	Objective C-SSS-OPM 1: —	Objective D-SSS-OPM 1: Identify and implement additional GRSG conservation actions that can augment, enhance, and/or integrate program conservation measures established in agency and state land use and policy plans.	Objective E-SSS-OPM 1: See Role of Sagebrush Ecosystem Technical Team.	Objective F-SSS-OPM 1: —
<b>Habitat Restoration/Vegetation Management</b>					
Goal A-VEG 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-VEG 1: —	Goal C-VEG 1: —	Goal D-VEG 1: Establish and maintain a resilient sagebrush vegetative community and restore sagebrush vegetation communities to reduce greater-GRSG habitat fragmentation and maintain or re-establish GRSG habitat connectivity over the long-term.	Goal E-VEG 1: The Nevada Sagebrush Ecosystem Council will work to achieve conservation through a goal of “no net loss” in the Occupied, Suitable and Potential Habitat categories within the sagebrush ecosystem for activities that can be controlled such as a planned disturbance or development. As a realistic, quantifiable goal, “no net loss” must be measured through effective mitigation monitoring over a number of years. Timeframes will be determined by the Nevada Sagebrush	Goal F-VEG 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>Ecosystem Council using the best available science.</p> <p>The fundamental hierarchical decision-making policy of "Avoid, Minimize and Mitigate" will be followed:</p> <p><u>Avoid</u> – Wherever possible, eliminate conflicts by relocating disturbance activities in order to conserve GRSG and their habitat.</p> <p><u>Minimize</u> – Modify proposed actions and develop permit conditions to include measures that lessen adverse effects on GRSG and their habitat to the furthest extent practical such as reducing the activity footprint, seasonal avoidance, co-location of structures, etc.</p> <p><u>Mitigate</u> – Only after all appropriate and practicable avoidance and minimization measures have been taken, offset residual adverse effects in Occupied and Suitable Habitat by implementing additional actions that will result in replacement of an asset (mainly habitat) that will be lost as a result of a development action.</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-VEG 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG 1: N—	Objective C-VEG 1: —	Objective D-VEG 1: In PPMA and PGMA including riparian, manage for vegetation composition and structure consistent with ecological site potential and to achieve GRSg seasonal habitat objectives (see Table 2-6).	<p>Objective E-VEG 1: SGMAs include Occupied Habitat, Suitable Habitat, Potential Habitat, and Non Habitat, as defined in the State of Nevada 2012 Plan. The Nevada Sagebrush Ecosystem Council – through field verifications and recommendations from the Nevada Sagebrush Ecosystem Technical Team based on the best available science – will further refine the habitat categories within the SGMAs. Also, it is understood that the final nomenclature for these habitat categories may vary.</p> <p>Management Strategy in Occupied/Suitable Habitat</p> <ul style="list-style-type: none"> <li>• Manage to avoid surface disturbance and habitat alteration to the greatest extent possible. If avoidance is not possible, disturbances greater than or equal to five percent of 640 acres (32 acres) within Occupied Habitat will trigger habitat evaluations and consultation with the Nevada Sagebrush Ecosystem Technical Team (see PMA-2).</li> <li>• Limit habitat treatments in winter ranges to</li> </ul>	Objective F-VEG 1: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>actions that maintain or expand current levels of sagebrush available in winter.</p> <ul style="list-style-type: none"><li>● Proactively monitor habitat and manage to ensure that it retains the attributes necessary to support viable GRSG populations.</li></ul> <p>Management Strategy in Potential Habitat</p> <ul style="list-style-type: none"><li>● Potential Habitat should be used for habitat enhancement and restoration to expand or restore Occupied or Suitable Habitat that has been adversely impacted either by acts of nature (e.g. wildfire and Pinyon-Juniper encroachment) or by human activities.</li><li>● Potential Habitat should be prioritized for enhancement and restoration based on data-driven models that incorporate ecological site potential and identify the highest priority sites with the greatest potential for success.</li></ul> <p>Management Strategy in Non Habitat</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"> <li>Use areas designated as Non Habitat within SGMAs to site activities that are not geographically restricted to specific resources.</li> </ul> <p>Avoid undertaking habitat enhancement or restoration in Non Habitat areas with little or no potential for success.</p>	
Objective A-VEG 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG 2: —	Objective C-VEG 2: —	Objective D-VEG 2: Focus and prioritize habitat restoration to address identified threats at the Sub-Population and Population scale.	<p>Objective E-VEG 2: SGMAs include Occupied Habitat, Suitable Habitat, Potential Habitat, and Non Habitat, as defined in the State of Nevada 2012 Plan. The Nevada Sagebrush Ecosystem Council – through field verifications and recommendations from the Nevada Sagebrush Ecosystem Technical Team based on the best available science – will further refine the habitat categories within the SGMAs. Also, it is understood that the final nomenclature for these habitat categories may vary.</p> <p>Management Strategy in Occupied/Suitable Habitat</p> <ul style="list-style-type: none"> <li>Manage to avoid surface disturbance and habitat alteration to the greatest extent possible.</li> </ul>	Objective F-VEG 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>If avoidance is not possible, disturbances greater than or equal to five percent of 640 acres (32 acres) within Occupied Habitat will trigger habitat evaluations and consultation with the Nevada Sagebrush Ecosystem Technical Team (see PMA-2).</p> <ul style="list-style-type: none"> <li>• Limit habitat treatments in winter ranges to actions that maintain or expand current levels of sagebrush available in winter.</li> <li>• Proactively monitor habitat and manage to ensure that it retains the attributes necessary to support viable GRSG populations.</li> </ul> <p>Management Strategy in Potential Habitat</p> <ul style="list-style-type: none"> <li>• Potential Habitat should be used for habitat enhancement and restoration to expand or restore Occupied or Suitable Habitat that has been adversely impacted either by acts of nature (e.g. wildfire and Pinyon-Juniper encroachment) or by human activities.</li> </ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"><li>● Potential Habitat should be prioritized for enhancement and restoration based on data-driven models that incorporate ecological site potential and identify the highest priority sites with the greatest potential for success.</li></ul> <p>Management Strategy in Non Habitat</p> <ul style="list-style-type: none"><li>● Use areas designated as Non Habitat within SGMAs to site activities that are not geographically restricted to specific resources.</li></ul> <p>Avoid undertaking habitat enhancement or restoration in Non Habitat areas with little or no potential for success.</p>	
Objective A-VEG 3: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG 3: —	Objective C-VEG 3: —	Objective D-VEG 3: Focus rehabilitation efforts on re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential.	Objective E-VEG 3: See above.	Objective F-VEG 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-VEG 4: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG 4: —	Objective C-VEG 4: —	Objective D-VEG 4: Restore native (or desirable) plants and create landscape patterns (e.g., seral stage and spatial distribution) which most benefit GRSG.	Objective E-VEG 4: See above.	Objective F-VEG 4: —
Objective A-VEG 5: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG 5: —	Objective C-VEG 5: —	Objective D-VEG 5: Within PPMA and PGMA manage lotic and lentic riparian areas to maintain a component of perennial forbs with diverse species richness and maintain suitable cover; manage associated upland habitat to promote adjacent cover relative to site potential to facilitate brood rearing (See Table 2-6).	Objective E-VEG 5: See above.	Objective F-VEG 5: —
Objective A-VEG 6: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG 6: —	Objective C-VEG 6: —	Objective D-VEG 6: Manage lentic riparian (i.e. seeps, springs, and wet meadows) to meet GRSG cover and food objectives in PPMA and PGMA.	Objective E-VEG 6: See above.	Objective F-VEG 6: —
<i>Integrated Invasive Species Management</i>					
Objective V A-EG-ISM 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG-ISM 1: —	Objective C-VEG-ISM 1: —	Objective D-VEG-ISM 1: —	Objective E-VEG-ISM 1: —	Objective F-VEG-ISM 1: Develop and implement methods for prioritizing and restoring sagebrush steppe invaded by nonnative plants.
<i>Climate Change</i>					
Goal A-VEG-CC 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-VEG-CC 1: —	Goal C-VEG-CC 1: —	Goal D-VEG-CC 1: Use the landscape approach and promote landscape scale, ecosystem based actions to enhance resiliency and sustainability of GRSG habitat to climate stress.	Goal E-VEG-CC 1: <u>TMA-22</u> : Positive outcomes of an effective adaptive management program are realized over the long-term.	Goal F-VEG-CC 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-VEG-CC 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG-CC 1: —	Objective C-VEG-CC 1: —	Objective D-VEG-CC 1: Focus treatments to restore connectivity and habitat in fragmented areas where natural recovery or restoration treatments have a moderate to high record of success and have a stable bio-climate forecast.	Objective E-VEG-CC 1: See Role of Sagebrush Ecosystem Technical Team.	Objective F-VEG-CC 1: —
Objective A-VEG-CC 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG-CC 2: —	Objective C-VEG-CC 2: —	Objective D-VEG-CC 2: Manage risks associated with landscape stressors of drought, invasive species, and wildfire exacerbated by climate change to maintain existing GRSG habitat.	Objective E-VEG-CC 2: See Role of Sagebrush Ecosystem Technical Team.	Objective F-VEG-CC 2: —
Drought					
Goal A-VEG-D 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-VEG-D 1: —	Goal C-VEG-D 1: —	Goal D-VEG-D 1: Manage sagebrush ecosystems in a manner that maintains adequate forage and water for wildlife species during periods of drought.	Goal E-VEG-D 1: See Role of Sagebrush Ecosystem Technical Team.	Goal F-VEG-D 1: —
Objective A-VEG-D 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-VEG-D 1: —	Objective C-VEG-D 1: —	Objective D-VEG-D 1: Ensure authorized activities and uses do not result in degradation or net loss of PPMA during periods of drought through application of appropriate drought mitigation measures, such as ensuring adequate residual cover is available for nesting birds.	Objective E-VEG-D 1: See Role of Sagebrush Ecosystem Technical Team. No similar objective.	Objective F-VEG-D 1: —
<b>Wild Horses and Burros</b>					
Goal A- WHB 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-WHB 1: —	Goal C-WHB 1: —	Goal D-WHB 1: Manage active HMAs and HAS and WHBTs to achieve GRSG habitat objectives in PPMA and PGMA.	Goal E-WHB 1: <u>TMA-11.1</u> : Maintain wild horses at AMLs in designated HMAs throughout SGMAs.	Goal F-WHB 1: Reduce AMLs within HMAs, Has, and WHBTs within occupied GRSG habitat by 25% to meet habitat objectives. —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-WHB 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-WHB 1: —	Objective C-WHB 1: —	Objective D-WHB 1: Establish or adjust AML within HMAs, HAS, and Forest Service WHBTs within PPMA and PGMA that consider the life cycle requirements for GRSG populations in terms of forage and nesting cover.	Objective E-WHB 1: <u>TMA-11.2:</u> Evaluate conflicts with HMA designations in SGMAs and modify LUPs to avoid negative impacts on GRSG. If necessary, resolve conflicts between the Wild and Free Roaming Horse and Burro Act and the ESA.	Objective F-WHB 1: Reduce AMLs within HMAs, HAS, and WHBTs within occupied GRSG habitat by 25% to meet habitat objectives.
Objective A-WHB 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-WHB 2: Manage wild horse and burro population levels within established AMLs.	Objective C-WHB 2: Same as Alternative A.	Objective D-WHB 2: Manage wild horse and burro population levels in PPMA and PGMA within established AMLs to maintain or enhance GRSG habitat objectives.	Objective E-WHB 2: <u>TMA-11.2:</u> Evaluate conflicts with HMA designations in SGMAs and modify LUPs to avoid negative impacts on GRSG. If necessary, resolve conflicts between the Wild and Free Roaming Horse and Burro Act and the ESA.	Objective F-WHB 2: Reduce AMLs within HMAs, HAS, and WHBTs within occupied GRSG habitat by 25% to meet habitat objectives.
Objective A-WHB 3: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-WHB 3: Prioritize gathers in PPMA, unless removals are necessary in other areas to prevent catastrophic environmental issues, including herd health impacts.	Objective C-WHB 3: Same as Alternative A.	Objective D-WHB 3: Prioritize gathers in HMAs, HAS and WHBTs to meet established AMLs in PPMAs and PGMA, unless removals are necessary in other areas to address higher priority environmental issues, including herd health impacts.	Objective E-WHB 3: See Role of Sagebrush Ecosystem Technical Team.	Objective F-WHB 3: Same as Alternative B.
Fire and Fuels Management					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Goal A-FFM 1: No common goal across LUPs within the sub-region. See <b>Section 2.1.</b>	Goal B-FFM 1: —	Goal C-FFM 1: —	Goal D-FFM 1: Fire, pre-/post-fire suppression and fuels management would contribute to the protection of large, contiguous blocks of sagebrush habitat that support interconnecting GRSG populations.	Goal E-FFM 1: <u>TMA-1.3</u> : Support the Nevada Division of Forestry’s “Wildland Fire Protection Program,” a statewide comprehensive wildfire management program that engages all interagency partners (federal, state & local), to reduce the threats of catastrophic wildfire, rapidly suppress wildfires, and rehabilitate lands damaged by wildfire  <u>TMA-1.2</u> : Actively manage SGMAs across all jurisdictions with the goal of restoring the appropriate role of wildfire to establish resiliency, and actively engage in prevention, suppression and restoration of the effects of fire and invasive species.	Goal F-FFM 1: —
Goal A-FFM 2: No common goal across LUPs within the sub-region. See <b>Section 2.1.</b>	Goal B-FFM 2: —	Goal C-FFM 2: —	Goal D-FFM 2: Pre-suppression activities would provide conservation actions that identify and prioritize GRSG habitats that are vulnerable to wildfire events and prescribe actions important for their protection.	Goal E-FFM 2: <u>TMA-2.1</u> : Strengthen and improve interagency wildfire prevention activities statewide through targeted wildfire prevention messages including education on habitat loss, updating interagency agreements, conducting wildfire prevention workshops, and demonstration projects.	Goal F-FFM 2: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Goal A-FFM 3: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-FFM 3: —	Goal C-FFM 3: —	Goal D-FFM 3: Pre-suppression and suppression efforts would reduce the size and impact of wildfires on GRSG and their habitat.	Goal E-FFM 3: <u>TMA-1.4</u> : Continue the expansion and implementation of a framework across all land jurisdictions for pre-suppression actions to minimize ignitions and alter fuel conditions in order to avoid, whenever possible, large damaging conflagrations.	Goal F-FFM 3: —
Goal A-FFM 4: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-FFM 4: —	Goal C-FFM 4: —	Goal D-FFM 4: In PPMAs and PGMAs, design and implement emergency stabilization and rehabilitation treatments with an emphasis on restoring existing sagebrush ecosystems damaged by wildfires, including the control of invasive species.	Goal E-FFM 4: <u>TMA-1</u> : Protect, maintain and improve sagebrush habitat statewide over time by treating, rehabilitating and restoring at least as many acres of Occupied/Suitable and Potential Habitat as are lost to wildfire.  <u>TMA-1.6</u> : Following fires, continue the expansion and implementation of sagebrush enhancement and restoration treatments consistent with GRSG management objectives in appropriate ecological sites.	Goal F-FFM 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Goal A-FFM 5: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-FFM 5: —	Goal C-FFM 5: —	Goal D-FFM 5: In PPMA, design and implement fuels treatments with an emphasis on protecting existing sagebrush ecosystems and strategically and effectively reduce wildfire threats in the greatest area.	Goal E-FFM 5: Continue the construction of targeted, well designed fuel breaks and “green strips” to break up fuel continuity, reduce fire size, and create safe areas for fire suppression activities. Use the best adapted plant materials to revegetate green strips with fire resistant species. Fund and schedule regular maintenance activities of green strips as needed. Avoid locating fuel breaks in SGMAs unless no other options are available that will result in the same level of habitat protection.	Goal F-FFM 5: —
Objective A-FFM 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 1: —	Objective C-FFM 1: —	Objective D-FFM 1: Prioritize post-fire treatments in PPMAs and PGMAs to maximize benefits to GRSG. Restoration focuses on restoring burned sagebrush areas with the appropriate cover and structure to support GRSG populations.	Objective E-FFM 1: <u>TMA-4.4</u> : Continue identifying and obtaining funding opportunities from Federal, State, local, industry and land users dedicated to implementing prioritized habitat enhancement, restoration, and conservation activities.	Objective F-FFM 1: —
Objective A-FFM 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 2: —	Objective C-FFM 2: —	Objective D-FFM 2: In PPMAs and PGMAs, minimize threats from invasive species.	Objective E-FFM 2: <u>TMA-4</u> : Carefully review and evaluate all burned areas within SGMAs in a timely manner to ascertain the reclamation potential for reestablishing GRSG habitat, enhancing ecosystem resiliency, and controlling invasive weed species.	Objective F-FFM 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-FFM 3: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 3: —	Objective C-FFM 3: —	Objective D-FFM 3: Protect post-fire treatments in PPMAs and PGMAs from subsequent wildfires.	Objective E-FFM 3: <u>TMA-4.1</u> : Complete burn severity assessments and identify ecological site potential in, and in proximity to, SGMAs to identify the areas with the highest potential for restoration of habitat functions following fires. Focus rehabilitation efforts on areas of highest potential success based ecological site conditions (soils, precipitation zone, and geography). Utilize revegetation seed mixtures that include native and adapted plant seed that will quickly stabilize soils, help to provide long term hazardous fuels reduction, and increase ecosystem resiliency in appropriate locations	Objective F-FFM 3: —
Objective A-FFM 4: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 4: —	Objective C-FFM 4: —	Objective D-FFM 4: Retain, protect, and improve intact, unburned sagebrush communities within burned areas.	Objective E-FFM 4: <u>TMA-3.7</u> : Within SGMAs, eliminate the tactic of “burning out,” including backfiring unless there are direct life safety threats.	Objective F-FFM 4: —
Objective A-FFM 5: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 5: —	Objective C-FFM 5: —	Objective D-FFM 5: Make progress toward desired future condition (DFC) in the low elevation shrub, mountain shrubs and pinyon and juniper vegetation types.	Objective E-FFM 5: <u>TMA-2.2</u> : Continue successful landscape level habitat assessments in, and in proximity to, SGMAs to identify those habitat areas that are at the highest risk of wildland fire.	Objective F-FFM 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-FFM 6: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 6: —	Objective C-FFM 6: —	Objective D-FFM 6: Design post-fuels management projects to ensure long term persistence of seeded fuel breaks and green strips protecting native vegetation.	Objective E-FFM 6: <u>TMA-2.8</u> : Continue to successfully treat existing areas of invasive vegetative that pose a threat to SGMAs through the use of herbicides, fungicides or bacteria to control cheatgrass and medusahead infestations.	Objective F-FFM 6: —
Objective A-FFM 7: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 7: —	Objective C-FFM 7: —	Objective D-FFM 7: Provide for sufficient Unit staffing for initial attack response to wild land fires in PPMAs and PGMAs.	Objective E-FFM 7: <u>TMA-3.4</u> : Increase initial attack capability by training and equipping volunteer firefighters, as well as agricultural and other industry work forces for assignment during periods of high fire activity. Trained volunteers who are remotely located will serve as first responders when necessary and appropriate.	Objective F-FFM 7: —
Objective A-FFM 8: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 8: —	Objective C-FFM 8: —	Objective D-FFM 8: Fire Management Plans reflect guidance for wildland fire suppression in PPMAs and PGMAs and take into consideration GRSG sub-population areas.	Objective E-FFM 8: <u>TMA-3.8</u> : Designate Occupied and Suitable Habitat in SGMAs as a “high priority value” for suppression resource allocation in the Geographical Area Coordination Centers and within the FEMA Fire Management Assistance Grant criteria.	Objective F-FFM 8: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-FFM 9: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-FFM 9: —	Objective C-FFM 9: —	Objective D-FFM 9: —	Objective E-FFM 9: Through the Nevada Sagebrush Ecosystem Council, utilizing the “avoid, minimize and mitigate” strategy, and with the goal of restoring the appropriate role of wildfire, following the successful Nevada Department of Agriculture programs that are a benefit to GRSG will continue.	Objective F-FFM 9: —
<b>Livestock Grazing</b>					
Goal A-LG 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-LG 1: —	Goal C-LG 1: —	Goal D-LG 1: Manage livestock grazing to maintain and/or enhance PPMAs and PGMAs to meet all life cycle requirements of the GRSG during permit administration.	Goal E-LG 1: <u>TMA-12</u> : Ensure that existing grazing permits maintain or enhance SGMAs. Utilize livestock grazing when appropriate as a management tool to improve GRSG habitat quantity, quality or to reduce wildfire threats. Based on a comprehensive understanding of seasonal GRSG habitat requirements, and in conjunction with flexibility of livestock operators, encourage land management agencies to cooperatively make timely, seasonal range management decisions to respond to vegetation management objectives, including fuels reduction.	Goal F-LG 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-LG 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-LG 1: —	Objective C-LG 1: —	Objective D-LG 1: In PPMAs and PGMA, manage for vegetation composition and structure consistent with ecological site potential to achieve GRSG seasonal habitat objectives (see Table 2-6).	Objective E-LG 1: <u>TMA-12.1</u> : Expand the promotion of proper livestock grazing practices that promote the health of perennial grass communities as this condition has been found to suppress the establishment of cheatgrass (Blank and Morgan 2012).	Objective F -LG 1: —
Objective A-LG 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-LG 2: —	Objective C-LG 2: —	Objective D-LG 2: Manage lentic and lotic riparian areas in PPMAs and PGMA to maintain a component of perennial forbs with diverse species richness and maintain suitable cover; manage adjacent upland habitat to promote adjacent cover relative to site potential to facilitate brood rearing (see Table 2-6).	Objective: E-LG 2: <u>TMA-12.2</u> : Grazing management strategies for riparian areas should, at a minimum, maintain or achieve riparian PFC. Specific management actions include riparian fencing to provide control of the season, duration or degree of herbivory, providing alternate water sources away from the riparian area, changing the grazing system, or other grazing management practices that promote herbage removal within acceptable limits.	Objective F-LG 2: —
Objective A-LG 3: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B- LG 3: —	Objective C-LG 3: —	Objective D-LG 3: —	Objective E-LG 3: See Role of Sagebrush Ecosystem Technical Team.	Objective F-LG 3: Encourage partners to monitor effects of retiring grazing permits in GRSG habitat.
Recreation and Visitor Services					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Goal A-REC 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-REC 1: —	Goal C-REC 1: —	Goal D-REC 1: In PPMAs and PGMAAs, manage recreation and visitor services in a manner that provides for quality visitor experience on public lands while minimizing human disturbance to GRSG and its life cycle requirements.	Goal E-REC 1: <u>TMA-16</u> : In SGMAs, continue successful programs following the “avoid, minimize and mitigate” concept for recreation and OHV impacts on GRSG habitat.	Goal F-REC 1: —
Objective A-REC 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-REC 1: —	Objective REC 1: —	Objective D-REC 1: In PPMAs and PGMAAs, manage commercial and noncommercial motorized and nonmotorized recreation uses on public lands in a manner compatible with the life-cycle requirements for GRSG.	Objective E-REC 1: <u>TMA-16</u> : In SGMAs, continue successful programs following the “avoid, minimize and mitigate” concept for recreation and OHV impacts on GRSG habitat.	Objective F-REC 1: —
<b>Comprehensive Travel and Transportation Management (CTTM)</b>					
Goal A-CTTM 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-CTTM 1: —	Goal C-CTTM 1: —	Goal D-CTTM 1: Manage travel and transportation in a manner that maintains healthy and intact PPMAs and PGMAAs, minimizes disturbance to GRSG populations, and provides for reasonable access to public lands.	Goal E-CTTM 1: <u>TMA-16</u> : In SGMAs, continue successful programs following the “avoid, minimize and mitigate” concept for recreation and OHV impacts on GRSG habitat.	Goal F-CTTM 1: —
Objective A-CTTM 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-CTTM 1: —	Objective C-CTTM 1: N—	Objective D-CTTM 1: Prioritize and complete transportation planning in PPMAs and PGMAAs that provides for reasonable access to public lands for administrative and recreational purposes and that minimizes proliferation of user-created routes (roads, primitive roads, and trails).	Objective E-CTTM 1: <u>TMA-16.1</u> : Study the impact caused by recreational and OHV use in GRSG habitat.	Objective F-CTTM 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-CTTM 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-CTTM 2: —	Objective C-CTTM 2: —	Objective D-CTTM 2: Manage motorized travel on public lands by designating routes in PPMAs and PGMA that are compatible with the life-cycle requirements for GRSG.	Objective E-CTTM 2: <u>TMA-16.2</u> : Work collaboratively through LAWGs, state, and federal agencies to designate OHV areas outside of SGMAs.	Objective F-CTTM 2: —
<b>Lands and Realty</b>					
Goal A-LR 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-LR 1: —	Goal C-LR 1: —	Goal D-LR 1: Manage land tenure adjustments and land uses to maintain or enhance PPMAs and PGMA and connectivity.	Goal E-LR 1: PMA-3.3 and TMA-21.9: To ensure that mitigation efforts to create, restore or enhance habitat are not intentionally disturbed in the future, long-term conservation easements or a record of restrictive covenant should be established over the property. If public lands are used for mitigation purposes, adequate long-term maintenance or replacement of mitigation objectives must be considered while recognizing existing uses (State of Nevada 2012).  <u>TMA-8</u> : Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the	Goal F-LR 1: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				longer-term transmission needs required to meet the State and Nation's renewable energy demands.	
Objective A-LR 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-LR 1: —	Objective C-LR 1: —	Objective D-LR 1: Manage and minimize effects of land use authorizations on PPMAs and PGMAs through grant stipulations and terms and conditions.	Objective E-LR 1: <u>MA-8.1</u> : Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.  <u>TMA-18.9</u> : Energy developers will work closely with State and Federal agency experts to determine important nesting, brood rearing and winter habitats and avoid those areas.	Objective F-LR 1: —
<b>Leasable Minerals</b>					
<i>Fluid Minerals</i>					
Goal A-Lease-FM 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-Lease-FM 1: —	Goal C-Lease-FM 1: —	Goal D-Lease-FM 1: Manage the Federal Fluid Mineral Estate to meet National energy needs in a development framework that gives priority consideration to maintaining or increasing GRSG populations and distribution.	Goal E-Lease-FM 1: <u>TMA-15</u> : Through the Nevada Sagebrush Ecosystem Council, encourage the strong conservation ethic in the mining industry by implementing effective avoidance management, and enhancement and reclamation of disturbed lands to preserve, protect, and improve habitat in SGMAs. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved Nevada	Goal F-Lease-FM 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals.	
Objective A-Lease-FM 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-Lease-FM 1: —	Objective C-Lease-FM 1: Any oil, gas, geothermal activity will be conducted to maximize avoidance of impacts, based on evolving scientific knowledge of impacts.	Objective D-Lease-FM 1: —	Objective E-Lease-FM 1: See Role of Sagebrush Ecosystem Technical Team.	Objective F-Lease-FM 1: —
Objective A-Lease-FM 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-Lease-FM 2: —	Objective C-Lease-FM 2: N—	Objective D-Lease-FM 2: Conserve and maintain the quality and distribution of PPMAs and PGMAs through application of lease stipulations, COAs, and RDFs on existing and future leases.	Objective E-Lease-FM 2: See Role of Sagebrush Ecosystem Technical Team.	Objective F-Lease-FM 2: —
<b>Locatable Minerals</b>					
Goal A-LOC 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-LOC 1: —	Goal C-LOC 1: —	Goal D-LOC 1: Manage locatable mineral development to consider effects on PPMAs.	Goal E-LOC 1: <u>TMA-6.2</u> : Continue statewide Weed Seed Free Forage and Gravel Certification Program  Inspect and certify gravel and forage products as weed-free to prevent noxious weeds from spreading onto valuable Forest Service lands where these products are required and/or onto any other regions of the	Goal F-LOC 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				state where these products are transported or used.	
Objective A-LOC 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-LOC 1: —	Objective C-LOC 1: —	Objective D-LOC 1: Authorize Plans of Operation per 43 CFR 3809 regulations that minimize impacts on GRSG PPMAs and PGMAs.	Objective E-LOC 1: <u>TMA-15.2</u> : Consistent with BLM 43 CFR 3809 regulations for Notice-level operations, and Forest Service 36 CFR 228A regulations governing mining and exploration, allow exploration and other mineral-related activities that create not more than five acres of surface disturbance. The BLM and Forest Service may exercise existing discretionary authority to consider other information, including cumulative impacts.	Objective F-LOC 1: —
Objective A-LOC 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-LOC 2: —	Objective C-LOC 2: —	Objective D-LOC 2: Provide reasonable access and development opportunity to claimants in PPMAs, consistent with rights provided under the General Mining Act of 1872 and the need to conserve, maintain, or enhance PPMAs through prevention of undue or unnecessary degradation for activities not reasonably incident to explore and develop the resource.	Objective E-LOC 2: <u>TMA-15.1</u> : Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMAs.	Objective F-LOC 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-LOC 3: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-LOC 3: —	Objective C-LOC 3: —	Objective D-LOC 3: Manage disturbances associated with notice level activity in PPMAs on a landscape basis by encouraging operators and claimants to consolidate exploration activities into exploration plans of operation to reduce proliferation of discrete mining notices per 43 CFR 3809.21(b).	Objective E-LOC 3: <u>TMA-15.4</u> : Recognize existing state and federal regulatory mechanisms that govern mining and exploration activities, including BLM 43 CFR 3809 surface management regulations for hard rock mining, Forest Service 36 CFR 228A regulations governing mining and exploration, and NAC 519A regulations for reclamation of mining and exploration projects, that are adequate to conserve GRSG and sagebrush habitats in the interim until future Suitable conservation plans are approved by the Nevada Sagebrush Ecosystem Council.	Objective F-LOC 3: —
<b>Salable Minerals</b>					
Goal A-SAL 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-SAL 1: —	Goal C-SAL 1: —	Goal D-SAL 1: Manage salable minerals to meet the State's demand for sand, gravel, and rock materials while providing for conservation and maintenance or enhancement of PPMAs.	Goal E-SAL 1: <u>TMA-15</u> : Through the Nevada Sagebrush Ecosystem Council, encourage the strong conservation ethic in the mining industry by implementing effective avoidance management, and enhancement and reclamation of disturbed lands to preserve, protect, and improve habitat in SGMAs. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on	Goal F-SAL 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals.	
Objective A-SAL 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SAL 1: —	Objective C-SAL 1: —	Objective D-SAL 1: Minimize disturbances from salable mineral activities in PPMAs and PGMA.s.	Objective E-SAL 1: <u>TMA-15.1</u> : Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMA.s.	Objective F-SAL 1: —
Objective A-SAL 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SAL 2: —	Objective C-SAL 2: —	Objective D-SAL 2: Provide reasonable access and development opportunity to Federal Highway Administration, NDOT, and Counties and the public for existing mineral materials pits in PPMAs and PGMA.s.	Objective E-SAL 2: <u>TMA-15.1</u> : Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMA.s.	Objective F-SAL 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-SAL 3: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-SAL 3: —	Objective C-SAL 3: —	Objective D-SAL 3: Conserve and maintain the quality and distribution of GRSG habitat through on-site and off-site mitigation to achieve no net un-mitigated loss of PPMAs or provide for the enhancement of PPMAs within the WAFWA management zone.	Objective E-SAL 3: <u>TMA-15.1</u> : Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMAs.	Objective F-SAL 3: —
<b>Nonenergy Leasable Minerals</b>					
Goal A-NEL 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-NEL 1: —	Goal C-NEL 1: —	Goal D-NEL 1: Manage non-energy leasable minerals to maintain or increase GRSG populations and distribution.	Goal E-NEL 1: See Role of Sagebrush Ecosystem Technical Team.	Goal F-NEL 1: —
Objective A-NEL 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-NEL 1: —	Objective C-NEL 1: —	Objective D-NEL 1: Conserve and maintain the quality and distribution of PPMAs and PGMAs.	Objective E-NEL 1: See Role of Sagebrush Ecosystem Technical Team.	Objective F-NEL 1: —
<b>Mineral Split Estate</b>					
Goal A-MSE 1: No common goal across LUPs within the sub-region. See <b>Section 2.1</b> .	Goal B-MSE 1: —	Goal C-MSE 1: —	Goal D-MSE 1: Manage federal split estate (private surface/federal minerals; federal surface/private minerals) to provide for the conservation, maintenance and enhancement of PPMAs and PGMAs.	Goal E-MSE 1: See Role of Sagebrush Ecosystem Technical Team.	Goal F-MSE 1: No similar goal.—
Objective A-MSE 1: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-MSE 1: —	Objective C-MSE 1: —	Objective D-MSE 1: For federal mineral estate, minimize surface disturbance in PPMAs and PGMAs to the maximum extent practicable on private surface.	Objective E-MSE 1: See Role of Sagebrush Ecosystem Technical Team.	Objective F-MSE 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Objective A-MSE 2: No common objective across LUPs within the sub-region. See <b>Section 2.1</b> .	Objective B-MSE 2: —	Objective C-MSE 2: —	Objective D-MSE 2: For federal surface estate, minimize surface disturbance in PPMAs and PGMAs to the maximum extent practicable consistent with use rights to the private mineral estate.	Objective E-MSE 2: See Role of Sagebrush Ecosystem Technical Team.	Objective F-MSE 2: —
<p>*Alternative E was submitted by the State of Nevada’s Governor’s office and only covers land within the decision area in the State of Nevada. The State of California lands will follow Alternative A.</p> <p><sup>1</sup>The use of “—” indicates that there is no similar goal or objective, or that the similar goal or objective is reflected in another management action in the alternative.</p>					

This page intentionally  
left blank



**Table 2.5. Description of Alternative Actions**

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
<b>Special Status Species (Greater Sage-Grouse)</b>					
Action A-SSS 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS 1: —	Action C-SSS 1: —	Action D-SSS 1: Identify seasonal habitat areas where an array of conservation actions can be completed to improve habitat conditions.	Action E-SSS 1: —	Action F-SSS 1: —
Action A-SSS 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS 2: —	Action C-SSS 2: —	Action D-SSS 2: Work cooperatively to establish and maintain a GRSG telemetry database to help prioritize habitat conservation actions.	Action E-SSS 2: —	Action F-SSS 2: —
Action A-SSS 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS 3: —	Action C-SSS 3: —	Action D-SSS 3: —	Action E-SSS 3: TMA 9.4: Address and eliminate conflicting regulations between the Migratory Bird Treaty Act and the ESA. Pursue additional take permits in excess of the current 2,000 bird limit from the USFWS for raven control. If necessary, pursue additional raven take in excess of the current 2,000 bird limit from the USFWS for raven control.	Action F-SSS 3: —
Action A-SSS 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS 4: —	Action C-SSS 4: —	Action D-SSS 4: —	Action E-SSS 4: TMA 9.6: Monitor effects of predator control to determine causal relations with GRSG survivability and adapt control strategies accordingly.	Action F-SSS 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS 5: —	Action C-SSS 5: —	Action D-SSS 5: —	Action E-SSS 5: TMA 9.6: When downward population trends and nesting success are detected in SGMAs, initiate predator surveys and identify responsible predator species to target and implement an effective predator control effort.	Action F-SSS 5: —
Action A-SSS 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS 6: —	Action C-SSS 6: —	Action D-SSS 6: —	Action E-SSS 6: Implement a predator control program to reduce transient raven populations for nest protection and increased chick survival throughout the interim period while habitat enhancement and restoration projects become established. GRSG population, nest success and recruitment goals should be established for all SGMAs	Action F-SSS 6: —
Action A-SSS 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS 7: —	Action C-SSS 7: —	Action D-SSS 7: Implement the RDFs in areas outside of mapped PPMA and PGMA where GRSG use has been observed or suspected, areas and habitats which may be necessary to maintain viability of GRSG, or where the activity would affect GRSG or	Action E-SSS 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS 7: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			their habitat in PPMA or PGMA.		
Adaptive management					
Action A-SSS-AM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-AM 1: —	Action C-SSS-AM 1: —	Action D-SSS-AM 1: Establish a protocol for incorporating new science and changes over time, to update and keep State-wide habitat maps current.	Action E-SSS-AM 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-AM 1: —
Action A-SSS-AM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-AM 2: —	Action C-SSS-AM 2: —	Action D-SSS-AM 2: Continue to consult with the NDOW for all development or habitat restoration proposals in PPMAs and PGMAs. Also, coordinate with the Nevada Sagebrush Ecosystem Council, the CDFW and tribes on projects proposed within sagebrush ecosystems	Action E-SSS-AM 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-AM 2: —
Action A-SSS-AM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-AM 3: —	Action C-SSS-AM 3: —	Action D-SSS-AM 3: Identify off-site mitigation areas within PGMAs with reasonable potential to achieve vegetation objectives and meet the seasonal habitat needs of GRSG. These are areas where mitigation would occur for application of off-site mitigation actions.	Action E-SSS-AM 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-AM 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-AM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-AM 4: —	Action C-SSS-AM 4: —	Action D-SSS-AM 4: Natural Resources Conservation Service (NRCS), BLM, and Forest Service will engage private landholders to improve habitat conditions.	Action E-SSS-AM 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-AM 4: —
Action A-SSS-AM 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-AM 5: —	Action C-SSS-AM 5: —	Action D-SSS-AM 5: —	<p>Action E-SSS-AM 5: Through the Nevada Sagebrush Ecosystem Council, and its Nevada Sagebrush Ecosystem Technical Team, utilizing the “avoid, minimize and mitigate” strategy, the following will occur:</p> <ul style="list-style-type: none"> <li>• Develop consistent monitoring protocols and methods to be used across all land jurisdictions and agencies. Compile all project monitoring data into one GRSG database managed by the Nevada Sagebrush Ecosystem Technical Team for use in adaptive management and reporting.</li> <li>• Monitoring of mitigation sites must be included in all plans, with consistent protocols to assess specific metrics</li> </ul>	Action F-SSS-AM 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>and determine trends for habitat quantity/quality and GRSG populations.</p> <ul style="list-style-type: none"><li>• All statewide monitoring data will be accessible to the Nevada Sagebrush Technical Team through a centralized geographic database. The team will compile annual reports of habitat trends. All monitoring plans must include specific objectives and detailed procedures.</li><li>• Monitor GRSG activity and demographics with annual assessments and intensive levels of investigation to answer questions about the effectiveness of conservation strategies in terms of measured responses of key demographic parameters (e.g. nest success, chick survival, and movement) associated with sites where management activities have been implemented.</li></ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"><li>• Conduct annual lek counts across most Population Management Units. Train volunteers who provide additional manpower in assisting with additional lek counts. Volunteers must be qualified by attending a day-long training session that includes actual field training each year.</li><li>• Population demographic data is determined from the GRSG harvest. Hunters shall deposit one wing from each bird harvested in wing barrels located on primary hunting access roads, check stations, or to be delivered to a NDOW Field or Regional Office. Wings shall be separated by geographic locations (county or hunt area). Wings shall be used to identify sex, age, nest success, and number of chicks per hen.</li><li>• Monitor harvest through the use of</li></ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>the 10% Hunter Questionnaire that randomly polls license holders and through the collection of GRSG wings from hunter harvested birds.</p> <ul style="list-style-type: none"><li>● Regulate harvest by season length and bag limit as set forth by the Nevada Board of Wildlife Commissioners and, consulting recommendations made by the NDOW.</li><li>● In areas that are closed to hunting, wing data are not available for monitoring population demographics such as the number of chicks per hen. For these areas, conduct brood counts along established routes. Brood surveys shall be conducted mid-summer when GRSG are concentrated on meadow habitats. Established brood count routes shall be surveyed to record average brood size</li></ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>and the number of chicks per hen.</p> <ul style="list-style-type: none"><li>• Satellite telemetry data shall be compiled and provided to the Nevada Sagebrush Ecosystem Technical Team for local plan revisions and updates, and coordinated statewide to determine seasonal habitats such as breeding, nesting, brood rearing; movement patterns; and survival rates.</li><li>• Appropriate state and federal agencies will continue to coordinate with the U.S. Geological Survey, Biological Resources Division and associated National Wildlife Health Center to conduct investigations into the effects of West Nile virus and other disease pathogens on GRSG.</li></ul>	



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-AM 6: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-SSS-AM 6: —	Action C-SSS-AM 6: —	Action D-SSS-AM 6: —	Action E-SSS-AM 6: When population, nesting success, and recruitment goals are not met, implement an effective predator control effort for ravens, badgers, and coyotes as needed, based on biological assessments appropriate to local conditions. Conduct predator control to coincide with the life stage impacted by predation. SGMAs should be prioritized for predator control. If a SGMA meets or exceeds the reproductive and population objectives, move predator control to the next lower SGMA priority.	Action F-SSS-AM 6: —
Action A-SSS-AM 7: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-SSS-AM 7: —	Action C-SSS-AM 7: —	Action D-SSS-AM 7: The agencies would coordinate with the Nevada Sagebrush Technical Team on all proposed disturbances within the state of Nevada to meet the mutual goal of no unmitigated loss.	Action E-SSS-AM 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-AM 7: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-AM 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-AM 8: —	Action C-SSS-AM 8: —	Action D-SSS-AM 8: The BLM and Forest Service would coordinate with the Nevada Sagebrush Technical Team on the application of the Conservation Credit System (once it is established) for mitigation of activities that disturb GRSG habitat within Nevada where the application of the mitigation would occur on or the credit would be applied to disturbance on Public or National Forest Lands.	Action E-SSS-AM 8: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-AM 8: —
Action A-SSS-AM 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-AM 9: —	Action C-SSS-AM 9: —	Action D-SSS-AM 9: GRSG habitat categorization and use management boundaries would be evaluated and adjusted based on continuing inventory and monitoring results every five years. Adjustments up to plus or minus ten percent of the mapped habitat within the population management zone would be made without further analysis.	Action E-SSS-AM 9: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-AM 9: —
Climate Change					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-CC 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-SSS-CC 1: —	Action C-SSS-CC 1: —	Action D-SSS-CC 1: As climate change data become available through REAs or other ecological studies, identify areas of unfragmented GRSG habitat and key habitat linkages that provide the life-cycle and genetic transfer needs for GRSG. Manage the identified areas as PPMAs.	Action E-SSS-CC 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-CC 1: —
Action A-SSS-CC 2: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-SSS-CC 2: —	Action C-SSS-CC 2: —	Action D-SSS-CC 2: Work cooperatively with multiple agencies and stakeholders to establish and maintain a network of climate monitoring sites and stations.	Action E-SSS-CC 2: —	Action F-SSS-CC 2: —
Disease					
Action A-SSS-DIS 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-SSS-DIS 1: —	Action C-SSS-DIS 1: —	Action D-SSS-DIS 1: When developing or modifying water developments on public lands in PPMAs and PGMAs, use RDFs to mitigate potential impacts from West Nile virus.	Action E-SSS-DIS 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-DIS 1: —
Mitigation					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-MIT 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 1: No similar action	Action C-SSS-MIT 1: No similar action	Action D-SSS-MIT 1: —	Action E-SSS-MIT 1: PMA-3: The Nevada Sagebrush Ecosystem Mitigation Bank Program, a centralized mechanism to coordinate mitigation and pre-impact mitigation across all jurisdictions and land ownerships, will be the system to validate the success of all conservation efforts of GRSG populations and the sagebrush ecosystem in Nevada. The Nevada Sagebrush Ecosystem Council, through the Nevada Sagebrush Ecosystem Technical Team, will develop a set of metrics and credits to ensure that appropriate mitigation measures are applied consistently and transparently. By establishing this central mitigation bank, the State of Nevada will have a robust system that provides for consistent evaluation, oversight, monitoring, reporting of progress, and adaptive management for long-term certainty.	Action F-SSS-MIT 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-MIT 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 2: —	Action C-SSS-MIT 2: —	Action D-SSS-MIT 2: —	Action E-SSS-MIT 2: <u>PMA-3.1</u> : In determining appropriate mitigation, the functional values lost by the resource to be impacted must be considered and careful consideration must be given to its likelihood of success.	Action F-SSS-MIT 2: —
Action A-SSS-MIT 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 3: —	Action C-SSS-MIT 3: —	Action D-SSS-MIT 3: —	Action E-SSS-MIT 3: <u>PMA-3.2</u> : Mitigation will generally involve creation of habitat, restoration of habitat, long-term preservation of existing habitat, or enhancement of habitat to compensate for the unavoidable, residual adverse impacts of habitat disturbance.	Action F-SSS-MIT 3: —
Action A-SSS-MIT 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 3: —	Action C-SSS-MIT 3: —	Action D-SSS-MIT 3: —	Action E-SSS-MIT 3: <u>PMA-3.3</u> : To ensure that mitigation efforts to create, restore or enhance habitat are not intentionally disturbed in the future, long-term conservation easements or a record of restrictive covenant will be established over the property. If public lands are used for mitigation purposes, adequate long-term maintenance or replacement of mitigation objectives must be considered while	Action F-SSS-MIT 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				recognizing existing uses.	
Action A-SSS-MIT 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 4: —	Action C-SSS-MIT 4: —	Action D-SSS-MIT 4: —	Action E-SSS-MIT 4: <u>PMA-3.4</u> : Consideration and credit for appropriate mitigation will include habitat-based efforts (i.e. sagebrush habitat enhancement and restoration) along with other options such as fuels reduction, green stripping, fire suppression support and long-term habitat conservation agreements. Project proponents may receive credit for mitigation activities regardless of land ownership (i.e. federal, state or private lands).	Action F-SSS-MIT 4: —
Action A-SSS-MIT 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 5: —	Action C-SSS-MIT 5: —	Action D-SSS-MIT 5: —	Action E-SSS-MIT 5: <u>PMA-3.5</u> : Recognize and appropriately value mitigation measures that address threats, such as funding for wildfire equipment and training, predator control, radio telemetry and GPS monitoring, etc. when on-site mitigation has marginal chance for success.	Action F-SSS-MIT 5: —
Action A-SSS-MIT 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 6: —	Action C-SSS-MIT 6: —	Action D-SSS-MIT 6: —	Action E-SSS-MIT 6: <u>MA-3.6</u> : Mitigation will not be considered as a method of “avoidance.”	Action F-SSS-MIT 6: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-MIT 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-MIT 7: —	Action C-SSS-MIT 7: —	Action D-SSS-MIT 7: —	<p>Action E-SSS-MIT 7: <u>TMA-21</u>: Mitigation will be used to offset controlled disturbances in order to manage towards the goal of “no net loss” of Occupied and Suitable Habitat in SGMAs when avoidance and minimization options are exhausted (State of Nevada 2012).</p> <p><u>TMA-21.1</u>: The Nevada Sagebrush Ecosystem Mitigation Bank Program will be facilitated through the Nevada Sagebrush Ecosystem Council and staffed by the Nevada Sagebrush Ecosystem Technical Team. By establishing this central mitigation bank, the State of Nevada will have a system that provides for consistent evaluation, monitoring and reporting of progress on mitigation efforts (State of Nevada 2012).</p> <p><u>TMA-21.2</u>: The Nevada Sagebrush Ecosystem Technical Team will coordinate mitigation and pre-impact mitigation across all jurisdictions and land ownerships. The team</p>	Action F-SSS-MIT 7: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>will validate, track, and monitor the success of mitigation efforts (State of Nevada 2012).</p> <p><u>TMA-21.3:</u> Disturbances greater than or equal to five percent of 640 acres (32 acres) within Occupied Habitat will trigger evaluations and consultation with the Nevada Sagebrush Ecosystem Technical Team. This consultation will occur within the administrative framework established by the Nevada Sagebrush Ecosystem Council. New activities at any level of disturbance should minimize impacts on GRSG and their habitat (State of Nevada 2012).</p> <p><u>TMA-21.4:</u> Mitigation should generally involve creation of habitat, restoration of habitat, long-term preservation of existing habitat, or enhancement of habitat to compensate for the unavoidable or residual adverse impacts of habitat disturbance. Efforts will be made to accomplish this at a landscape level (State of Nevada 2012).</p>	



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>TMA-21.5: In determining measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology, and logistics in light of overall project purposes. The determination of appropriate mitigation will be based on the values and functions of the impacted habitat. In determining the nature and extent of habitat development, careful consideration should be given to its likelihood of success (State of Nevada 2012).</p> <p><u>TMA-21.7:</u> Consideration and credit for mitigation should include habitat based efforts (i.e. sagebrush habitat enhancement and restoration) along with other options such as fuels reduction, green stripping, fire suppression support and long-term habitat conservation agreements. Project proponents may receive credit for mitigation activities regardless of land</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>ownership (i.e. federal, state or private lands) (State of Nevada 2012).</p> <p><u>TMA-21.8:</u> Recognize and appropriately value measures that address threats, such as funding for wildfire equipment and training, predator control, radio telemetry and GPS monitoring, etc. (State of Nevada 2012).</p> <p><u>TMA-21.9:</u> To ensure that mitigation efforts to create, restore or enhance habitat are not intentionally disturbed in the future, long-term conservation easements or a record of restrictive covenant should be established over the property. If public lands are used for mitigation purposes, adequate long-term maintenance or replacement of mitigation objectives must be considered while recognizing existing uses (State of Nevada 2012).</p> <p><u>TMA-21.10:</u> Mitigation may not be used as a method to avoid habitat impacts.</p>	
Administrative Collaboration and decision making					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-ACDM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 1: —	Action C-SSS-ACDM 1: —	Action D-SSS-ACDM 1: —	Action E-SSS-ACDM 1: (Avoid) Wherever possible, eliminate conflicts by relocating disturbance activities in order to conserve GRSG and their habitat.	Action F-SSS-ACDM 1: —
Action A-SSS-ACDM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 2: —	Action C-SSS-ACDM 2: —	Action D-SSS-ACDM 2: —	Action E-SSS-ACDM 2: (Minimize) Modify proposed actions and develop permit conditions to include measures that lessen adverse effects on GRSG and their habitat to the furthest extent practical such as reducing the activity footprint, seasonal avoidance, co-location of structures, etc.	Action F-SSS-ACDM 2: —
Action A-SSS-ACDM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 3: —	Action C-SSS-ACDM 3: —	Action D-SSS-ACDM 3: —	Action E-SSS-ACDM 3: (Mitigate) Only after all appropriate and practicable avoidance and minimization measures have been taken, offset residual adverse effects in Occupied and Suitable Habitat by implementing additional actions that will result in replacement of an asset (mainly habitat) that will be lost as a result of a development action.	Action F-SSS-ACDM 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-ACDM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 4: —	Action C-SSS-ACDM 4: —	Action D-SSS-ACDM 4: —	<p>Action E-SSS-ACDM 4: Through the Nevada Sagebrush Ecosystem Council, a Governor-appointed, broad spectrum stakeholder forum, the following will occur:</p> <ul style="list-style-type: none"><li>● Review and approval of a process to coordinate development activities in SGMAs.</li><li>● Provision of a forum for participation from industry, state and federal resource management agencies, and the general public.</li><li>● Oversight of the Nevada Sagebrush Ecosystem Mitigation Bank Program.</li><li>● Development, review and approval of region-wide policies<ul style="list-style-type: none"><li>- in a transparent, consistent process</li><li>- that respond to sagebrush ecosystem threats.</li></ul></li><li>● Setting and clarifying policies and management criteria for SGMAs and</li></ul>	Action F-SSS-ACDM 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>establishment of well-defined decision thresholds for threat assessments and mitigation (regulatory process).</p> <ul style="list-style-type: none"><li>● Revision of SGMAs through field verifications and recommendations from the Nevada Sagebrush Ecosystem Technical Team based on the best available science.</li><li>● Establishment of policies for the identification and prioritization of landscape-scale enhancement, restoration, fuel reduction, and mitigation projects based upon ecological site potential, state and transition models, and other data that will contribute to decision making informed by science to increase resiliency.</li><li>● Secure and consolidated funding and the direction of major</li></ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>expenditures for GRSG conservation.</p> <ul style="list-style-type: none"> <li>● Facilitation and the resolution of conflicts between industry, land owners, and resource agencies when there is disagreement regarding GRSG management.</li> <li>● Receipt and approval of an annual report from the Nevada Sagebrush Ecosystem Technical Team that includes compiled and summarized data on development, enhancement, and restoration activities in SGMAs, GRSG population trends, and Nevada Sagebrush Ecosystem Mitigation Bank Program (PMA-3) progress. The Nevada Sagebrush Ecosystem Council will submit the annual report to the Governor, USFWS, BLM, Forest Service, local and tribal governments and the general public.</li> </ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"> <li>• Development of standards and protocols to propose to the BLM and Forest Service in order to facilitate expedited NEPA review for restoration activities in SGMAs.</li> <li>• Encourage and facilitate land management education and training for all SGMA user groups.</li> </ul>	
Action A-SSS-ACDM 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 5: —	Action C-SSS-ACDM 5: —	Action D-SSS-ACDM 5: —	<p>Action E-SSS-ACDM 5: The Nevada Sagebrush Ecosystem Technical Team, a multidisciplinary team with representatives from the Nevada Department of Agriculture, the Nevada Department of Conservation and Natural Resources Divisions of Forestry and State Lands, and the NDOW will:</p> <ul style="list-style-type: none"> <li>• In accordance with the Nevada Sagebrush Ecosystem Council's policy, oversee administration and operation of the Nevada Sagebrush Ecosystem</li> </ul>	Action F-SSS-ACDM 5:

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>Mitigation Bank Program (PMA-3).</p> <ul style="list-style-type: none"> <li>● Identify and prioritize landscape-scale enhancement, restoration, fuel reduction, and mitigation projects based upon ecological site potential, state and transition models, and other data that will contribute to decision making informed by science to increase rangeland resiliency prior to and following wildfire.</li> <li>● Foster and maintain collaborative processes with State, local and Federal agencies to expedite permitting. As deemed appropriate by the Nevada Sagebrush Ecosystem Council, decision-making will be extended to the Nevada Sagebrush Ecosystem Technical Team such that permitting will be expedited rather than extended by an added layer of bureaucracy.</li> </ul>	



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"> <li>• Provide consultation for project proponents who want to conduct activities in SGMAs to incorporate “avoid, minimize, and mitigate” practices into project designs. Project applicants will have the opportunity to conduct “ground-truthing” for the presence or absence of habitat.</li> <li>• Assist the BLM and Forest Service as appropriate to evaluate the cumulative effects of individual small projects (less than five acres) to avoid exceeding a tolerable level of disturbance in SGMAs and to determine if additional mitigation is required.</li> <li>• Acquire data to refine SGMAs using best available science.</li> <li>• Solicit grants and private contributions for sagebrush ecosystem</li> </ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>conservation and restoration projects.</p> <ul style="list-style-type: none"><li>● Establish a repository to maintain the inventory of development and mitigation projects, population data, and monitoring results.</li><li>● Compile and summarize data annually, and submit an annual progress report to the Nevada Sagebrush Ecosystem Council.</li><li>● Conduct regular adaptive management evaluations to make management and policy recommendations to the Nevada Sagebrush Ecosystem Council.</li><li>● Engage and coordinate activities with Local Area Working Groups through existing State Conservation Districts.</li></ul> <p>Coordinate continued engagement of proven collaborative successes by charging LAWGs</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				with responsibilities such as a) developing and implementing site-specific plans to accomplish enhancement and restoration projects on federal lands that are identified by the Nevada Sagebrush Ecosystem Council as areas of high importance to GRSG; b) updating SGMA maps; c) monitoring; d) identifying potential habitat enhancement and restoration projects; and e) other tasks where local, site-specific expertise can provide added value.	
Action A-SSS-ACDM 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 6: —	Action C-SSS-ACDM 6: —	Action D-SSS-ACDM 6: —	Action E-SSS-ACDM 6: Limit habitat treatments in winter ranges to actions that maintain or expand current levels of sagebrush available in winter.	Action F-SSS-ACDM 6: —
Action A-SSS-ACDM 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 7: —	Action C-SSS-ACDM 7: —	Action D-SSS-ACDM 7: —	Action E-SSS-ACDM 7: Proactively monitor habitat and manage to ensure that it retains the attributes necessary to support viable GRSG populations.	Action F-SSS-ACDM 7: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-ACDM 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 8: —	Action C-SSS-ACDM 8: —	Action D-SSS-ACDM 8: —	Action E-SSS-ACDM 8: Potential Habitat should be used for habitat enhancement and restoration to expand or restore Occupied or Suitable Habitat that has been adversely impacted either by acts of nature (e.g. wildfire and Pinyon-Juniper encroachment) or by human activities.	Action F-SSS-ACDM 8: —
Action A-SSS-ACDM 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-ACDM 9: —	Action C-SSS-ACDM 9: —	Action D-SSS-ACDM 9: —	Action E-SSS-ACDM 9: Potential Habitat should be prioritized for enhancement and restoration based on data-driven models that incorporate ecological site potential and identify the highest priority sites with the greatest potential for success.	Action F-SSS-ACDM 9: —
Opportunities for Proactive Measures					
Action A-SSS-OPM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-OPM 1	Action C-SSS-OPM 1—	Action D-SSS-OPM 1: Identify seasonal habitat areas where an array of conservation actions can be completed to improve habitat conditions.	Action E-SSS-OPM 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-OPM 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-OPM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-OPM 2: —	Action C-SSS-OPM 2: —	Action D-SSS-OPM 2: Consider the use of a GRSG telemetry database to help prioritize habitat conservation actions.	Action E-SSS-OPM 2: See Role of Sagebrush Ecosystem Technical Team.  <u>TMA-22.12</u> : Satellite telemetry data shall be compiled and provided to the Nevada Sagebrush Ecosystem Technical Team for local plan revisions and updates, and coordinated statewide to determine seasonal habitats such as breeding, nesting, brood rearing; movement patterns; and survival rates.	Action F-SSS-OPM 2: —
Action A-SSS-OPM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-OPM 3: —	Action C-SSS-OPM 3: —	Action D-SSS-OPM 3: Establish a protocol for incorporating new science and changes over time, to update and keep State-wide habitat maps current.	Action E-SSS-OPM 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-OPM 3: —
Action A-SSS-OPM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-OPM 4: —	Action C-SSS-OPM 4: —	Action D-SSS-OPM 4: Continue to consult with the NDOW for all development or habitat restoration proposals in PPMAs and PGMAs. Also, coordinate with the Nevada Sagebrush Ecosystem Council and the CDFW on projects proposed within sagebrush ecosystems.	Action E-SSS-OPM 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-SSS-OPM 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SSS-OPM 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SSS-OPM 5: —	Action C-SSS-OPM 5: —	Action D-SSS-OPM 5: Identify areas within PGMA's where off-site mitigation should occur to ensure GRSG habitat goals are met. When providing guidance to applicants, ensure project proponents that may be contributing to potential mitigation are aware of such areas.	<p>Action E-SSS-OPM 5: See Role of Sagebrush Ecosystem Technical Team.</p> <p><u>TMA-21.1:</u> The Nevada Sagebrush Ecosystem Mitigation Bank Program will be facilitated through the Nevada Sagebrush Ecosystem Council and staffed by the Nevada Sagebrush Ecosystem Technical Team. By establishing this central mitigation bank, the State of Nevada will have a system that provides for consistent evaluation, monitoring and reporting of progress on mitigation efforts.</p> <p><u>TMA-21.4:</u> Mitigation should generally involve creation of habitat, restoration of habitat, long-term preservation of existing habitat, or enhancement of habitat to compensate for the unavoidable or residual adverse impacts of habitat disturbance. Efforts will be made to accomplish this at a landscape level.</p>	Action F-SSS-OPM 5: —
Habitat Restoration/Vegetation Management					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-VEG 1: —	Action C-VEG 1: —	<p>Action D-VEG 1: In PPMA and PGMA, coordinate, plan, design, and implement vegetation treatments (e.g., juniper removal, fuels treatments, and green stripping) and associated effectiveness monitoring between Resources, Vegetation Management, Emergency Stabilization, and Burned Area Rehabilitation programs to:</p> <ul style="list-style-type: none"> <li>• Promote the maintenance of large intact sagebrush communities;</li> <li>• Limit the expansion or dominance of invasive species and noxious weeds, including conifers, cheatgrass and medusa head;</li> <li>• Maintain or improve soil site stability, hydrologic function, and biological integrity; and</li> <li>• Enhance the native plant community with appropriate shrub, grass, and forb composition</li> </ul>	Action E-VEG 1: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			identified in the applicable Ecological Site Description (ESD) where available.		
<p>Action A-VEG 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b>.</p>	<p>Action B-VEG 2: Prioritize implementation of restoration projects based on environmental variables that improve chances for project success in areas most likely to benefit GRSG (Meinke et al. 2009).</p> <p>Prioritize restoration in seasonal habitats that are thought to be limiting GRSG distribution and/or abundance.</p>	<p>Action C-VEG 2: Same as Alternative A.</p>	<p>Action D-VEG 2: Utilize BLM/Forest Service agency GRSG habitat maps to prioritize habitat restoration projects (see Table 2-6 for objectives of restoration) with emphasis in PPMAs, and to connect seasonal ranges regardless of habitat designation.</p> <p>Habitat restoration would include but is not limited to:</p> <ul style="list-style-type: none"> <li>• Restoration of sagebrush canopy in areas within GRSG nesting and brood-rearing habitat.</li> <li>• Re-establishment of perennial grasses and native forbs in areas within GRSG nesting, early and late-brood rearing habitat.</li> <li>• Reduce or remove pinyon or juniper in areas to enhance seasonal range connectivity,</li> </ul>	<p>Action E-VEG 2: See role of Sagebrush Ecosystem Technical Team.</p>	<p>Action F-VEG 2: Prioritize implementation of restoration projects based on environmental variables that improve chances for project success in areas most likely to benefit GRSG (Meinke et al. 2009).</p> <p>Prioritize restoration in seasonal habitats that are thought to be limiting GRSG distribution and/or abundance and where factors causing degradation have already been addressed (e.g., changes in livestock management).</p>



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			<p>improve security at leks, and to maintain sagebrush canopy and understory integrity in nesting and brood-rearing habitats.</p> <ul style="list-style-type: none"> <li>• Restoration of all GRSG habitat objectives in areas affected by wildfire and the continuing cheat-grass fire cycle.</li> <li>• Priority would be on restoration areas that have not crossed an ecological threshold.</li> </ul>		
Action A-VEG 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 3: Include GRSG habitat parameters as defined by Connelly et al. (2000a), Hagen et al. (2007) or if available, state GRSG plans and appropriate local information in habitat restoration objectives. Make meeting these objectives within PPMAs the highest restoration priority.	Action C-VEG 3: Same as Alternative A.	Action D-VEG 3: Incorporate GRSG habitat objectives as described in Table 2-6 in the design of habitat restoration projects in PPMAs and PGMAs.	Action E-VEG 3: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 3: Include GRSG habitat objectives in habitat restoration. Make meeting these objectives within PPMAs and PGMAs the highest restoration priority.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 4: —	Action C-VEG 4: Composition, function, and structure of native vegetation communities will be consistent with the reference state of the appropriate ESD and will provide for healthy, resilient, and recovering GRSG habitat components.	Action D-VEG 4: —	Action E-VEG 4: —	Action F-VEG 4: —
Action A-VEG 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 5: Require use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success (Richards et al. 1998). Where probability of success or adapted seed availability is low, nonnative seeds may be used as long as they support GRSG habitat objectives (Pyke 2011).	Action C-VEG 5: Seed local native ecotypes in areas of more intensive disturbance.	Action D-VEG 5: In order to determine effectiveness of actions within PPMAs and PGMAs, encourage seeding and planting research and demonstration plots on public lands for restoration and conservation of key vegetation communities, including but not limited to low, gray, and black sagebrush, and riparian areas, with academia, Tribes, public agencies and approved private companies or individuals.	Action E-VEG 5: <u>TMA-4.2</u> : Continue the expansion of, and improvements to, the Nevada Division of Forestry Seedbank & Plant Material program in conjunction with Federal partners. Utilize Nevada Division of Forestry conservation camp crews for native seed collection and rehabilitation activities. Improve storage capabilities for native seed and desirable species that provide a competitive advantage over invasive species and improve storage capabilities to promote longevity of available seed.	Action F-VEG 5: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 6: —	Action B-VEG 6: —	Action C-VEG 6: —	Action D-VEG 6: Within PPMAs and PGMAs, prioritize and implement seeding and planting treatments in low sage communities that have been affected by wildfire. To the extent feasible or available, use local seed collected from intact stands or greenhouse cultivation. To increase seeding success, consider the use of specialized seed drills to ensure effective soil and seed contact.	Action E-VEG 6: <u>TMA-4.2</u> : Continue the expansion of, and improvements to, the Nevada Division of Forestry Seedbank & Plant Material program in conjunction with Federal partners. Utilize Nevada Division of Forestry conservation camp crews for native seed collection and rehabilitation activities. Improve storage capabilities for native seed and desirable species that provide a competitive advantage over invasive species and improve storage capabilities to promote longevity of available seed.	Action F-VEG 6: —
Action A-VEG 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 7: Design post restoration management to ensure long term persistence. This could include changes in livestock grazing management, wild horse and burro management, and travel management, etc., to achieve and maintain the desired condition of the restoration effort that benefits	Action C-VEG 7: Same as Alternative A.	Action D-VEG 7: —	Action E-VEG 7: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 7: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	GRSG (Eiswerth and Shonkwiler 2006).				
Action A-VEG 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 8: Consider potential changes in climate (Miller et al. 2011) when proposing restoration seedings when using native plants. Consider collection from the warmer component of the species current range when selecting native species (Kramer and Havens 2009).	Action C-VEG 8: Same as Alternative A.	Action D-VEG 8: Same as Alternative A.	Action E-VEG 8: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 8: Same as Alternative B.
Action A-VEG 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 9: Restore native (or desirable) plants and create landscape patterns which most benefit GRSG.	Action C-VEG 9: Exotic seedings will be rehabbed, interseeded, restored to recover sagebrush in areas to expand PPMAs.	Action D-VEG 9: Same as Alternative A.	Action E-VEG 9: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 9: —
Action A-VEG 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 10: Make re-establishment of sagebrush cover and desirable understory plants (relative to ecological site potential) the highest priority for restoration efforts.	Action C-VEG 10: Same as Alternative A.	Action D-VEG 10: Same as Alternative A.	Action E-VEG 10: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 10:

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 11: In fire prone areas where sagebrush seed is required for GRSg habitat restoration, consider establishing seed harvest areas that are managed for seed production (Armstrong 2007) and are a priority for protection from outside disturbances.	Action C-VEG 11: Same as Alternative A.	Action D-VEG 11: —	Action E-VEG 11: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 11: Same as Alternative B.
Action A-VEG 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 12: —	Action C-VEG 12: Active restoration practices: <ul style="list-style-type: none"> <li>● Removal of livestock water troughs, pipelines, and wells.</li> <li>● Where possible, without further damage to springs/water sources, remove waterline piping and maximize water at spring/stream sources supporting diverse riparian and meadow vegetation.</li> <li>● Promote natural healing of headcuts to the maximum extent possible by limiting disturbance throughout the watershed. At times, a combination of methods may need to be used – but gabions</li> </ul>	Action D-VEG 12: —	Action E-VEG 12: —	Action F-VEG 12: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<p>and structural devices and boulder dumping should be limited, and restoration should strive for a functioning system.</p> <ul style="list-style-type: none"><li>• Ripping/recontouring of roads and seeding with native local ecotypes of shrubs and grasses.</li></ul>			
Action A-VEG 13: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 13: —	Action C-VEG 13: Active restoration of crested wheatgrass seedlings. This can be accomplished, following targeted restoration planning to expand, reconnect or recover habitats required by GRSG by: <ul style="list-style-type: none"><li>• Inter-seeding sagebrush seed or seedlings.</li><li>• Remove crested wheatgrass through plowing while minimizing use of herbicides. Subsequent re-seeding with local native ecotypes.</li><li>• Active restoration of cheatgrass infestation areas.</li></ul>	Action D-VEG 13: —	Action E-VEG 13: —	Action F-VEG 13: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		In all cases, local native plant ecotype seeds and seedlings must be used.			
Action A-VEG 14: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 14: —	Action C-VEG 14: —	Action D-VEG 14: —	Action E-VEG 14: —	Action F-VEG 14: Avoid sagebrush reduction/treatments to increase livestock or big game forage in PPMAs and PGMAs and include plans to restore high-quality habitat in areas with invasive species. (Audubon)
Action A-VEG 15: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 15: —	Action C-VEG 15: —	Action D-VEG 15: No new roads (temporary or permanent) would be constructed or created during project implementation for vegetation treatments. Administrative access including off-road travel with heavy equipment and vehicles would occur during implementation. Loading and unloading of all equipment would occur on existing roads to minimize disturbance to vegetation and soil.	Action E-VEG 15: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 15: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 16: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 16: —	Action C-VEG 16: —	Action D-VEG 16: Within PPMAs and PGMA's, when closing and reseeding roads, primitive roads, and trails not designated in travel management plans, evaluate the location for strategic protection of the overall habitat and consider using fire resistant species to provide for fire break on a case-by-case basis.	Action E-VEG 16: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 16: —
Action A-VEG 17: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 17:	Action C-VEG 17	Action D-VEG 17: Evaluate vegetation treatments (including GRSG habitat treatments) in a landscape-scale context to address habitat fragmentation, effective patch size, invasive species presence, and protection of intact sagebrush communities.  Coordinate vegetation treatments with adjacent land owners and agencies to avoid any unintended negative landscape effects on GRSG.	Action E-VEG 17: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 17: —
Action A-VEG 18: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 18: —	Action C-VEG 18: —	Action D-VEG 18: Establish restoration areas where reseeding can be applied to improve impaired GRSG habitat.	Action E-VEG 18: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 18: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 19: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 19: —	Action C-VEG 19: —	Action D-VEG 19: In PPMAs and PGMAs, rest allotments or pastures for one growing season year prior to initiating vegetation treatments, as needed, to increase resiliency of vegetation communities prior to treatment, unless grazing is part of the vegetation treatment design.	Action E-VEG 19: See role of Sagebrush Ecosystem Technical Team.	Action A-VEG 19: —
Action A-VEG 20: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 20: —	Action C-VEG 20: —	Action D-VEG 20: In PPMAs and PGMAs, rest treated areas from livestock grazing for a minimum of two full growing seasons following treatment or until vegetation or habitat objectives are met.	Action E-VEG 20: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 20: —
Action A-VEG 21: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 21: —	Action C-VEG 21: —	Action D-VEG 21: In PPMAs and PGMAs, monitor and control noxious weeds and invasive annual grasses post-treatment to meet and sustain GRSG habitat and vegetation objectives (see Table 2-6).	Action E-VEG 21: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 21: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 22: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 22: —	Action C-VEG 22: —	Action D-VEG 22: Where winter range has been identified as a limiting factor, emphasize vegetation treatments in known winter range to enhance habitat quality or reduce wildfire risk around or within winter range habitat.	Action E-VEG 22: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 22: —
Action A-VEG 23: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 23: —	Action C-VEG 23: —	Action D-VEG 23: Manage lotic riparian habitats in conjunction with adjacent terraces and/or valley bottoms as natural fuel breaks to reduce size and frequency of wildfires in PPMAs and PGMAs.	Action E-VEG 23: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 23: —
Action A-VEG 24: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 24: —	Action C-VEG 24: —	Action D-VEG 24: In lotic and lotic riparian systems, conserve or enhance these systems to maintain or increase amount of edge and cover.	Action E-VEG 24: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 24: —
Action A-VEG 25: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 25: —	Action C-VEG 25: —	Action D-VEG 25: In PPMAs and PGMAs, in riparian and wet meadows, inventory, monitor for, and control invasive species. When treating invasive species, use the standard operating procedures and BMPs <sup>2</sup> outlined in the 2007 Vegetation Treatments Using Herbicides on BLM Lands in 17	Action E-VEG 25: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 25: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			States EIS and ROD, and for the Forest Service administered lands adhere to the Humboldt-Toiyabe Forest Directive for Herbicide Application and applicable practices found in its accompanying Biological Assessment.		
Action A-VEG 26: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 26: —	Action C-VEG 26: —	Action D-VEG 26: In PPMAs and PGMAs, design water developments to maintain ecological integrity of lentic riparian habitats. See management actions in the Range section.	Action E-VEG 26: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 26: —
Action A-VEG 27: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 27: —	Action C-VEG 27: —	Action D-VEG 27: In PPMAs and PGMAs, design and implement vegetation treatments to restore, enhance, and maintain riparian areas to meet seasonal life history requirements (e.g. late summer brood rearing habitat) for GRSG.	Action E-VEG 27: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 27: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 28: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 28: —	Action C-VEG 28: —	Action D-VEG 28: In PPMAs and PGMAs, where riparian extent is limited by shrub encroachment consider fuels treatments including prescribed burning or other means to increase edge and expand mesic areas to improve late summer brood-rearing habitat (see Table 2-6).	Action E-VEG 28: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 28: —
Action A-VEG 29: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 29: —	Action C-VEG 29: —	<p>Action D-VEG 29: For Wyoming, Mountain, and Basin Big Sage Communities in PPMAs and PGMAs:</p> <ul style="list-style-type: none"> <li>• Priority for treatment would focus on enhancing, reestablishing or maintaining the most limiting habitat component.</li> <li>• Reestablish sagebrush to meet habitat objectives in Table 2-6).</li> <li>• Manipulate sagebrush communities to achieve age-class, structure, cover, and species composition objectives in GRSG habitat (see Table 2-6).</li> </ul>	Action E-VEG 29: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 29: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			<ul style="list-style-type: none"><li>• Restore herbaceous understory in brush dominated areas to meet habitat objectives (see Table 2-6).</li><li>• Establish and maintain fuel breaks to limit fire size and mitigate fire behavior to increase suppression effectiveness. When possible, establish fuel breaks adjacent to roads or other previously disturbed areas.</li><li>• Treat areas with cheatgrass, other invasive and noxious species presence to minimize competition and favor establishment of desired species.</li><li>• Treat disturbed areas as soon as possible but within one year of the disturbance.</li><li>• Select the appropriate treatment method(s) that meets the vegetative objective per the decisions</li></ul>		

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			identified in the Vegetation Treatments on BLM Lands in 17 Western States Programmatic EIS and Associated ROD (BLM 2007a).		
Action A-VEG 30: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 30: —	Action C-VEG 30: —	Action D-VEG 30: Where pinyon and juniper trees are encroaching on sagebrush plant communities, design treatments to decrease conifer encroachment, and increase cover of sagebrush and/or understory to (1) improve habitat for GRSG; and (2) minimize avian predator perches and predation opportunities on GRSG.	Action E-VEG 30: <u>TMA-7</u> : Initiate landscape level treatments in SGMAs to reverse the effects of Pinyon-Juniper encroachment and restore healthy, resilient sagebrush ecosystems.	Action F-VEG 30: —
Action A-VEG 31: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG 31: —	Action C-VEG 31: —	Action D-VEG 31: For Low Sage/Black Sage Communities monitor and treat cheatgrass and other invasive species in low sage vegetation communities in PPMAs and PGMAs before it becomes a dominant species.	Action E-VEG 31: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 31: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG 32: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-VEG 32: —	Action C-VEG 32: —	Action D-VEG 32: For existing nonnative seeding: Allow natural establishment of sagebrush to occur in nonnative seedings within or adjacent to GRSG habitat. Manage seedings to allow succession toward sagebrush canopy cover more favorable for GRSG nesting and early brood-rearing needs.	Action E-VEG 32: See role of Sagebrush Ecosystem Technical Team.	Action F-VEG 32: —
<i>Integrated Invasive Species Management</i>					
Action A-VEG-ISM 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-VEG-ISM 1: —	Action C-VEG-ISM 1: —	Action D-VEG-ISM 1: Assess invasive annual grass presence/distribution prior to implementing vegetation restoration projects to determine if additional treatments are required to treat invasive annual grasses. Prioritize treatments to remove invasive annual grasses to provide most benefit to GRSG habitat conditions.	Action E-VEG-ISM 1: —	Action F-VEG-ISM 1: In GRSG habitat, ensure that soil cover and native herbaceous plants are at their ESD potential to help protect against invasive plants. In areas without ESDs, reference sites would be utilized to identify appropriate vegetation communities and soil cover.
Additional Management - Invasive Species and Conifer Encroachment					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-ISCE 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 1: —	Action C-VEG- ISCE 1: —	Action D-VEG- ISCE 1: Treat sites within PPMAs and PGMAs that are dominated by invasive species through an IVM approach using fire, chemical, mechanical and biological methods based on site potential.	<p>Action E-VEG- ISCE 1: TMA-6.1: Continue Nevada Department of Agriculture statewide surveys for the detection of incipient invasive and noxious plants in conjunction with USDA-APHIS and the Nevada Department of Transportation.</p> <ul style="list-style-type: none"> <li>• Conducts and attends numerous workshops, field days, booth and other events to promote education, awareness, and outreach to limit introduction and spread of invasive and noxious plants on public lands and natural habitat.</li> </ul> <p>Statewide CWMAs support program:</p> <ul style="list-style-type: none"> <li>• Provide technical assistance, project success monitoring and financial support to CWMAs through federal and state funding for projects performing the following tasks:</li> <li>• Noxious weed and invasive plant treatments on</li> </ul>	Action F-VEG- ISCE 1: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>lands degraded by infestations.</p> <ul style="list-style-type: none"><li>• Early Detection, Rapid Response (EDRR) surveying for new noxious weed species that are not already established in the state and pose new threats to healthy native plant ecosystems.</li><li>• Native planting and reseedling on previously treated sites or in areas susceptible to invasion in order to improve habitat and/or the overall health of lands.</li><li>• Educational activities directed toward local communities regarding the negative impacts of noxious weeds and the importance of infestation spread prevention and the implementation of integrated weed management plans.</li><li>• Provide technical assistance, project success monitoring and financial support</li></ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>to areas across the state that were previously burned and currently threatened by fires due to noxious weed infestations and/or fire fuels. Nonfederal land tasks include:</p> <ul style="list-style-type: none"> <li>○ Fuels reduction through noxious weed decadent material removal, noxious weed and invasive plant treatments, and other forested and riparian area fire fuel load thinning.</li> <li>○ Native planting and reseedling in cleared areas and degraded riparian habitat areas.</li> <li>○ Private landowner assistance in fire and invasive plant invasion prevention and land management plans.</li> </ul>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-ISCE 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 2: —	Action C-VEG-ISCE 2: —	Action D-VEG-ISCE 2: Targeted early season grazing would be allowed to suppress cheatgrass ( <i>Bromus tectorum</i> ) or other vegetation that are hindering achieving GRS objectives in PPMAs and PGMA. Sheep, cattle, or goats (where permitted) may be used as long as the animals are intensely managed and removed when the utilization of desirable species reaches 35%.	Action E-VEG-ISCE 2: <u>TMA-12.1</u> : Expand the promotion of proper livestock grazing practices that promote the health of perennial grass communities as this condition has been found to suppress the establishment of cheatgrass.	Action F-VEG-ISCE 2: —
Action A-VEG-ISCE 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 3: —	Action C-VEG-ISCE 3: —	Action D-VEG-ISCE 3: In perennial grass, invasive annual grass, and conifer-invaded cover types, restore sagebrush steppe with sagebrush seedlings where feasible.	Action E-VEG-ISCE 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-ISCE 3: —
Action A-VEG-ISCE 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 4: —	Action C-VEG-ISCE 4: —	Action D-VEG-ISCE 4: Pinyon and juniper treatment in PPMAs and PGMA would focus on enhancing, reestablishing, or maintaining habitat components (e.g. cover, security, and food) in order to achieve habitat objectives identified in Table 2-6. Treatment design should focus on addressing the	Action E-VEG-ISCE 4: <u>TMA-7</u> : Initiate landscape level treatments in SGMA to reverse the effects of Pinyon-Juniper encroachment and restore healthy, resilient sagebrush ecosystems. <u>TMA-7.5</u> : Allocate sufficient resources to fully address habitat loss	Action F-VEG-ISCE 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			most limiting habitat component.	and degradation in the next ten years.	
Action A-VEG-ISCE 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 5: —	Action C-VEG-ISCE 5: —	Action D-VEG-ISCE 5: —	Action E-VEG-ISCE 5: Inventory and prioritize areas for treatment of Phase I and Phase II encroachment in SGMAs to restore habitat resiliency, reduce avian predator perches, and increase forb and grass cover.	Action F-VEG-ISCE 5: —
Action A-VEG-ISCE 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 6: —	Action C-VEG-ISCE 6: —	Action D-VEG-ISCE 6: —	Action E-VEG-ISCE 6: Aggressively implement plans to remove Phase I and Phase II encroachment and treat Phase III encroachment to reduce the threat of severe conflagration and restore SGMAs where possible, especially in areas in close proximity to Occupied and Suitable Habitat.	Action F-VEG-ISCE 6: —
Action A-VEG-ISCE 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 7: —	Action C-VEG-ISCE 7: —	Action D-VEG-ISCE 7: Manage pinyon and juniper stands in encroached sagebrush vegetation communities to meet GRSG habitat objectives as described in Table 2-6. In areas with a sagebrush component, select treatment methods that maintain sagebrush and shrub cover and composition.	Action E-VEG-ISCE 7: <u>TMA-7.1</u> : Inventory and prioritize areas for treatment of Phase I and Phase II encroachment in SGMAs to restore habitat resiliency, reduce avian predator perches, and increase forb and grass cover.	Action F-VEG-ISCE 7: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-ISCE 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 8: —	Action C-VEG-ISCE 8: —	<p>Action D-VEG-ISCE 8: In Phase II and III pinyon and/or juniper stands in PPMAs and PGMAs:</p> <ul style="list-style-type: none"> <li>• Remove or reduce biomass to meet fuel and GRSG habitat objectives (see Table 2-6).</li> <li>• Take appropriate action to establish desired understory species composition, including seeding and invasive species treatments.</li> <li>• In areas with a sagebrush component, select a treatment method that maintains or improves sagebrush and shrub cover and composition.</li> </ul>	<p>Action E-VEG-ISCE 8: <u>TMA-7.2</u>: Aggressively implement plans to remove Phase I and Phase II encroachment and treat Phase III encroachment to reduce the threat of severe conflagration and restore SGMAs where possible, especially in areas in close proximity to Occupied and Suitable Habitat (State of Nevada 2012).</p> <p><u>TMA-7.3</u>: Prioritize areas for treatment of Phase III Pinyon-Juniper encroachment in strategic areas to break up continuous, hazardous fuel beds. Treat areas that have the greatest opportunity for recovery to SGMAS based on ecological site potential. Old growth trees should be protected on woodland sites (State of Nevada 2012).</p> <p><u>TMA-7.4</u>: Allow temporary road access to Phase I, Phase II, and Phase III treatment areas. Construct temporary access roads where access is needed with minimum design standards to avoid</p>	Action F-VEG-ISCE 8: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				and minimize impacts. Remove and restore temporary roads upon completion of treatment.	
Action A-VEG-ISCE 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 9: —	Action C-VEG-ISCE 9: —	Action D-VEG-ISCE 9: —	Action E-VEG-ISCE 9: Allow temporary road access to Phase I, Phase II, and Phase III treatment areas. Construct temporary access roads where access is needed with minimum design standards to avoid and minimize impacts. Remove and restore temporary roads upon completion of treatment.	Action F-VEG-ISCE 9: —
Action A-VEG-ISCE 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 10: —	Action C-VEG-ISCE 10: —	Action D-VEG-ISCE 10: —	Action E-VEG-ISCE 10: Allocate sufficient resources to fully address habitat loss and degradation in the next ten years.	Action F-VEG-ISCE 10: —
Action A-VEG-ISCE 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 11: —	Action C-VEG-ISCE 11: —	Action D-VEG-ISCE 11: —	Action E-VEG-ISCE 11: <u>TMA-7.7</u> : Continue to incentivize and assist in the development of bio-fuels and other commercial uses of Pinyon-Juniper resources.	Action F-VEG-ISCE 11: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-ISCE 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 12: —	Action C-VEG-ISCE 12: —	Action D-VEG-ISCE 12: —	Action E-VEG-ISCE 12: TMA-7.8: Increase the incentives for private industry investment in biomass removal, land restoration, and renewable energy development by authorizing stewardship contracts for up to 20 years.	Action F-VEG-ISCE 12: —
Action A-VEG-ISCE 13: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 13: —	Action C-VEG-ISCE 13: —	Action D-VEG-ISCE 13: —	Action E-VEG-ISCE 13: TMA-7.9: The Nevada Sagebrush Ecosystem Council will establish a goal for the number of acres to be treated annually and work to accomplish that goal over time.	Action F-VEG-ISCE 13: —
Action A-VEG-ISCE 14: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-ISCE 14: —	Action C-VEG-ISCE 14: —	Action D-VEG-ISCE 14: —	Action E-VEG-ISCE 14: Maintain a mosaic of shrub cover conditions ranging from twenty percent to forty percent in nesting habitat to provide both habitat resiliency and preferred nesting conditions for GRS in areas with high raven populations. Where this amount of shrub cover is not available (<25%), then perennial grass cover should exceed 10% (Coates et al. 2011) and annual grass cover should not exceed 5% (Blomberg et al. 2012).	Action F-VEG-ISCE 14: —
Habitat conservation for agriculture					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-HCA 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-HCA 1: —	Action C-VEG-HCA 1: —	Action D-VEG-HCA 1: —	Action E-VEG-HCA 1: TMA-10: Implement a best practices certification program for ranch management and forage production in consultation with the US Department of Agriculture, Natural Resource Conservation Service, and the Nevada Department of Agriculture.	Action F-VEG-HCA 1: —
Climate Change					
Action A-VEG-CC 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-CC 1: —	Action C-VEG-CC 1: —	Action D-VEG-CC 1: As climate change data become available through REAs or other ecological studies, identify areas of unfragmented GRSG habitat and key habitat linkages that provide the life-cycle and genetic transfer needs for GRSG.	Action E-VEG-CC 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-CC 1: —
Action A-VEG-CC 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-CC 2: —	Action C-VEG-CC 2: —	Action D-VEG-CC 2: Implement prevention and suppression actions to prevent additional loss to wildlife and cheatgrass domination in areas that are progressing towards recovery to build resiliency to climate change. Also, implement various treatments, such as seeding and shrub	Action E-VEG-CC 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-CC 2: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			plantings, to restore GRSG habitat.		
Action A-VEG-CC 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-CC 3: —	Action C-VEG-CC 3: —	Action D-VEG-CC 3: Implement juniper removal treatments in areas with high potential to restore GRSG habitat. Priority for treatments area:  Highest Priority - Phase 2 Pinyon and/or Juniper Stands to prevent long term loss of GRSG habitat due to the area crossing a restoration threshold.  Second Priority – Phase 1 Pinyon and/or Juniper stands to prevent the spread of the woodlands into GRSG habitat.	Action E-VEG-CC 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-CC 3: —
Action A-VEG-CC 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-CC 4: —	Action C-VEG-CC 4: —	Action D-VEG-CC 4: Implement treatments to reduce the presence of cheatgrass and restore sagebrush and native forbs and grasses in fragmented habitat with high potential for success. Also implement fuel treatments to protect these areas for wildlife.	Action E-VEG-CC 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-CC 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-CC 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-CC 5: —	Action C-VEG-CC 5: —	<p>Action D-VEG-CC 5: Implement hazardous fuels, noxious weed, and cheatgrass treatments as well as adjusting uses to protect native vegetation communities that provide high quality GRSG habitat.</p> <p>Priorities for treatments are:</p> <p>Highest priority – Areas of high quality habitat where forecasted bioclimatic conditions are predicted to persist through at least 2050.</p> <p>Second Priority – Areas of high to moderate value for GRSG habitat in lower elevations that are susceptible to cheatgrass domination and less likely to recover naturally from disturbance.</p> <p>Third Priority – Areas of high to moderate value for GRSG in higher elevations as that are more resistant to cheatgrass domination and more likely to recover naturally from disturbance.</p>	Action E-VEG-CC 5: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-CC 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-CC 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-CC 6: —	Action C-VEG-CC 6: —	Action D-VEG-CC 6: Build resiliency into restoration and enhancement seed mixes to ensure high value habitat persistence in light of anticipated climate change effects.	Action E-VEG-CC 6: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-CC 6: —
Action A-VEG-CC 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-CC 7: —	Action C-VEG-CC 7: —	Action D-VEG-CC 7: Work cooperatively with multiple agencies and stakeholders to establish and maintain a network of climate monitoring sites and stations.	Action E-VEG-CC 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-CC 7: —
Drought					
Action A-VEG-D 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-D 1: During drought periods, prioritize evaluating effects of the drought in PPMAs relative to their needs for food and cover. Since there is a lag in vegetation recovery following drought (Thurow and Taylor 1999; Cagney et al. 2010), ensure that post-drought management allows for vegetation recovery that meets GRSG needs in PPMAs.	Action C-VEG-D 1: —	Action D-VEG-D 1: —	Action E-VEG-D 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-D 1: During drought periods, prioritize evaluating effects of drought in GRSG habitat areas relative to their biological needs, as well as drought effects on ungrazed reference areas. Since there is a lag in vegetation recovery following drought (Thurow and Taylor 1999; Cagney et al. 2010), ensure that post-drought management allows for vegetation recovery that meets GRSG needs in GRSG habitat areas based on GRSG habitat objectives.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-VEG-D 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-D 2: —	Action C-VEG-D 2: —	Action D-VEG-D 2: In sagebrush ecosystems containing PPMAs and PGMAs, follow guidance in the Resource Management During Drought Handbook H-1730-1 (BLM 2011c). Apply appropriate drought mitigation measures to authorized uses and activities to reduce impacts on GRSG habitat and populations.	Action E-VEG-D 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-D 2: —
Action A-VEG-D 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-VEG-D 3: —	Action C-VEG-D 3: —	Action D-VEG-D 3: Initiate emergency management measures during times of drought to protect GRSG PPMAs and PGMAs. Implement post-drought management to allow for vegetation recovery that meets GRSG life cycle needs in PPMAs and PGMAs.	Action E-VEG-D 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-VEG-D 3: —
<b>Wild Horses and Burros</b>					
Action A-WHB 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-WHB 1: —	Action C-WHB 1: —	Action D-WHB 1: For all HMAs, HAs and WHBTs within or that contain PPMAs and PGMAs, manage wild horse and burro populations within established AML to meet GRSG habitat objectives. In HMAs, HAs, and WHBTs not meeting standards due to degradation	Action E-WHB 1: TMA-11: Manage wild horses at AMLs to avoid and minimize impacts on SGMAs.	Action F-WHB 1: Reduce AMLs within HMAs and reduce WHBTs within occupied GRSG habitat by 25% to meet habitat objectives. —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			that can be at least partially contributed to wild horse or burro populations, consider adjustments to AML through the NEPA process. Adjustments would be based on monitoring data and would seek to protect and enhance PPMAs and PGMAs and establish a thriving ecological balance.		
Action A-WHB 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-WHB 2: Within PPMAs, develop or amend BLM Herd Management Area Plans (HMAPs) and Forest Service WHBT Plans to incorporate GRSG habitat objectives and management considerations for all BLM HMAs and Forest Service WHBTs.	Action C-WHB 2: Same as Alternative A.	Action D-WHB 2: —	Action E-WHB 2: TMA-11: Manage wild horses at AMLs to avoid and minimize impacts on SGMAs.	Action F-WHB 2: Same as Alternative B, except reduce AMLs within HMAs and reduce WHBTs within occupied GRSG habitat by 25% to meet habitat objectives.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-WHB 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-WHB 3: For all BLM HMAs and Forest Service WHBTs within PPMAs, prioritize the evaluation of all AMLs based on indicators that address structure/condition/composition of vegetation and measurements specific to achieving GRSG habitat objectives.	Action C-WHB 3: Same as Alternative A.	Action D-WHB 3: —	Action E-WHB 3: TMA-11: Manage wild horses at AMLs to avoid and minimize impacts on SGMAs.	Action F-WHB 3: —
Action A-WHB 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-WHB 4: Coordinate with other resources (Range, Wildlife, and Riparian) to conduct land health assessments to determine existing structure/condition/composition of vegetation within all BLM HMAs and Forest Service WHBTs.	Action C-WHB 4: Same as Alternative A.	Action D-WHB 4: —	Action E-WHB 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-WHB 4: Same as Alternative B.
Action A-WHB 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-WHB 5: When conducting NEPA analysis for wild horse and burro management activities, water developments or other rangeland improvements for wild horses in PPMAs, address the direct and indirect effects on GRSG populations	Action C-WHB 5: Same as Alternative A.	Action D-WHB 5: —	Action E-WHB 5: See Role of Sagebrush Ecosystem Technical Team.	Action F-WHB 5: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	and habitat. Implement any water developments or rangeland improvements using the criteria identified for domestic livestock identified above in PPMAs.				
Climate Change					
Action A-WHB-CC 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-WHB-CC 1: —	Action C-WHB-CC 1: —	Action D-WHB-CC 1: As climate change data become available through REAs or other ecological studies, identify areas of unfragmented GRSG habitat and key habitat linkages that provide the life-cycle and genetic transfer needs for GRSG. Manage the identified areas as PPMAs.	Action E-WHB-CC 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-WHB-CC 1: —
Action A-WHB-CC 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-WHB-CC 2: —	Action C-WHB-CC 2: —	Action D-WHB-CC 2: Work cooperatively with multiple agencies and stakeholders to establish and maintain a network of climate monitoring sites and stations.	Action E-WHB-CC 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-WHB-CC 2: —
Fire Management					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 1: —	Action C-FFM 1: —	Action D-FFM 1: —	Action E-FFM 1: Continue the expansion and implementation of a framework across all land jurisdictions for pre-suppression actions to minimize ignitions and alter fuel conditions in order to avoid, whenever possible, large damaging conflagrations.	Action F-FFM 1: —
Action A-FFM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 2: —	Action A-FFM 2: —	Action D-FFM 2: —	Action E-FFM 2: Actively manage SGMAs across all jurisdictions with the goal of restoring the appropriate role of wildfire to establish resiliency, and actively engage in prevention, suppression and restoration of the effects of fire and invasive species.	Action F-FFM 2: —
Action A-FFM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 3: —	Action C-FFM 3: —	Action D-FFM 3: —	Action E-FFM 3: Continue the expansion and implementation of fire suppression plans and strategies across all land jurisdictions for SGMAs.	Action F-FFM 3: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 4: —	Action C-FFM 4: —	Action D-FFM 4: Implement a coordinated inter-agency approach to fire restrictions based upon National Fire Danger Rating System (NFDRS) thresholds (fuel conditions, drought conditions and predicted weather patterns) for GRSG habitat.	Action E-FFM 4: <u>TMA-2.1</u> : Strengthen and improve interagency wildfire prevention activities statewide through targeted wildfire prevention messages including education on habitat loss, updating interagency agreements, conducting wildfire prevention workshops, and demonstration projects.	Action F-FFM 4: —
Action A-FFM 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 5: —	Action C-FFM 5: —	Action D-FFM 5: Develop wildfire prevention plans that explain the resource value of GRSG habitat and include fire prevention messages and actions to reduce human-caused ignitions.	Action E-FFM 5: <u>TMA-2.1</u> : Strengthen and improve interagency wildfire prevention activities statewide through targeted wildfire prevention messages including education on habitat loss, updating interagency agreements, conducting wildfire prevention workshops, and demonstration projects.	Action F-FFM 5: —
Action A-FFM 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 6: —	Action C-FFM 6: —	Action D-FFM 6: 2 Fuel treatments will be designed through an interdisciplinary process to expand, enhance, maintain, and protect GRSG habitat. Use green strips and/or fuel breaks, where appropriate, to protect seeding efforts from subsequent fire events.	Action E-FFM 6: <u>TMA-2.3</u> : Continue the construction of targeted, well designed fuel breaks and “green strips” to break up fuel continuity, reduce fire size, and create safe areas for fire suppression activities. Use the best adapted plant materials to re-vegetate green strips	Action F-FFM 6: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			In coordination with USFWS and relevant state agencies, BLM/Forest Service planning units with large blocks of GRSG habitat will develop, using the assessment process described in <b>Appendix F</b> , Draft Greater Sage-Grouse Wildland Fire and Invasive Species Assessment, a fuels management strategy which considers an up-to-date fuels profile, land use plan direction, current and potential habitat fragmentation, sagebrush and GRSG ecological factors, and active vegetation management steps to provide critical breaks in fuel continuity, where appropriate. When developing this strategy, planning units will consider the risk of increased habitat fragmentation from a proposed action versus the risk of large scale fragmentation posed by wildfires if the action is not taken.	with fire resistant species. Fund and schedule regular maintenance activities of green strips as needed.	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 7: —	Action C-FFM 7: —	Action D-FFM 7: Apply seasonal restriction, as needed, for implementing fuels management treatments according to the type of seasonal habitat present.	Action E-FFM 7: <u>TMA-2.3</u> : Continue the construction of targeted, well designed fuel breaks and “green strips” to break up fuel continuity, reduce fire size, and create safe areas for fire suppression activities. Use the best adapted plant materials to re-vegetate green strips with fire resistant species. Fund and schedule regular maintenance activities of green strips as needed.	Action F-FFM 7: —
Action A-FFM 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 8: —	Action C-FFM 8: —	Action D-FFM 8: Annually complete a review of landscape assessment and implementation efforts with appropriate FWS and state agency personnel.	Action E-FFM 8: <u>TMA-3.2</u> : Update Fire Management Plans, dispatch run cards, and relevant agreements to ensure “closest forces” concepts are being utilized at all times, particularly nonfederal suppression resources (e.g. Nevada Division of Forestry helicopters, crews, and volunteer fire departments).  <u>TMA-3.3</u> : Establish and utilize Nevada Interagency Incident Management Teams (IMTs) for wildfires in SGMAs. Nevada currently has five Type 3 IMTs that are federally sponsored and comprised	Action F-FFM 8: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>of qualified federal, state and local government employees. These IMTs ensure that the State has IMT members with knowledge of Nevada's issues and natural resources, a key advantage over out-of-area IMTs that come to manage a Nevada fire with no local understanding</p> <p><u>TMA-3.5:</u> Integrate suppression resource locations within SGMAs and pre-position resources as conditions dictate.</p> <p><u>TMA-3.6:</u> Develop a "suitcase" interagency suppression task force (defined as a highly-mobile that could move throughout the state rapidly) for pre-positioning during high wildfire hazard periods. Activate up to three interagency "suitcase" task forces and pre-position them during Red Flag and predicted lightning events in SGMAs for initial attack response.</p> <p><u>TMA-3.14:</u> Assign a local, trained resource advisor with GRSG</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>expertise on all fire suppression responses in SGMAs.</p> <p><u>TMA-3.1:</u> Identify and develop suppression plans, including mapping of SGMAs, to improve initial attack suppression actions.</p>	
<p>Action A-FFM 9: No common action across LUPs within the sub-region. See <b>Section 2.1.</b></p>	<p>Action B-FFM 9: —</p>	<p>Action C-FFM 9: —</p>	<p>Action D-FFM 9: Threatened, endangered, and sensitive species (including GRSG) and associated habitats would continue to be a high priority for National and Geographic Multi-Agency Coordination Groups.</p>	<p>Action E-FFM 9: <u>TMA-1.2:</u> Actively manage SGMAs across all jurisdictions with the goal of restoring the appropriate role of wildfire to establish resiliency, and actively engage in prevention, suppression and restoration of the effects of fire and invasive species (State of Nevada 2012). Limit the use of fire as a management tool in Wyoming Big Sagebrush and Black Sagebrush plant communities.</p>	<p>Action F-FFM 9: —</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 10: —	Action C-FFM 10: —	Action D-FFM 10: Within acceptable risk levels utilize a full range of fire management strategies and tactics, including the management of wildfires to achieve resource objectives, across the range of GRSG habitat consistent with land use plan direction.	Action E-FFM 10: <u>TMA-3.9:</u> Utilize the interagency Fire Planning Assessment system to optimize utilization of fire suppression resources (e.g. engines, aircraft, water tenders, and hand crews). Fire Program Analysis enables local and national planners to evaluate the effectiveness of alternative fire management strategies for the purpose of meeting fire and land management goals and objectives.  <u>TMA-3.10:</u> Encourage use of the State's Air National Guard C-130 Unit with the Modular Airborne Firefighting System (MAFFS) for aerial firefighting support.  <u>TMA-3.11:</u> Increase the fleet of available heavy air tankers and develop a system for prioritizing their use to fight fires when needed.  <u>TMA-3.12:</u> Eliminate policy and operational inconsistencies by returning jurisdiction over Nevada BLM lands that are currently	Action F-FFM 10: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>managed by the California Surprise Field Office, placing that jurisdiction into the Carson City and Winnemucca Field Offices.</p> <p><u>TMA-3.13:</u> Develop a specific and concise package of information on SGMAs for incoming Incident Management Teams to ensure an understanding of Nevada conservation priorities that will be included in all Delegations of Authority and Fire Management Plans.</p> <p><u>TMA-1.5:</u> Continue the expansion and implementation of fire suppression plans and strategies across all land jurisdictions for SGMAs.</p>	
Action A-FFM 11: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM 11: —	Action C-FFM 11: —	Action D-FFM 11: —	Action E-FFM 11: <u>TMA-3.7:</u> Within SGMAs, eliminate the tactic of “burning out,” including backfiring unless there are direct life safety threats.	Action F-FFM 11: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 12: —	Action C-FFM 12: —	Action D-FFM 12: Within GRSG habitat, PPMAs (and PACs, if so determined by individual LUP efforts) are the highest priority for conservation and protection during fire operations and fuels management decision making. The PPMAs (and PACs, if so determined by individual LUP efforts) will be viewed as more valuable than PGMAs when priorities are established. When suppression resources are widely available, maximum efforts will be placed on limiting fire growth in PGMAs polygons as well. These priority areas will be further refined following completion of the GRSG Wildland Fire and Invasive Species Assessment described in <b>Appendix F</b> .	Action E-FFM 12: <u>TMA-3.9</u> : Utilize the interagency Fire Planning Assessment system to optimize utilization of fire suppression resources (e.g. engines, aircraft, water tenders, and hand crews). Fire Program Analysis enables local and national planners to evaluate the effectiveness of alternative fire management strategies for the purpose of meeting fire and land management goals and objectives.	Action F-FFM 12: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM 13: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM 13: —	Action C-FFM 13: —	Action D-FFM 13: In post-fire rehabilitation plans within PPMAs and PGMAs, design re-vegetation projects to (1) maintain and enhance unburned intact sagebrush communities when at risk from adjacent threats; (2) stabilize soils; (3) re-establish hydrologic function; (4) maintain and enhance biological integrity; (5) promote plant resiliency; (6) limit expansion or dominance or invasive species; and (7) reestablish native species.	Action E-FFM 13: <u>TMA-4.4:</u> Continue identifying and obtaining funding opportunities from Federal, State, local, industry and land users dedicated to implementing prioritized habitat enhancement, restoration, and conservation activities.	Action F-FFM 13: —
Action A-FFM 14: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM 14: —	Action C-FFM 14: —	Action D-FFM 14: In PPMAs and PGMAs, use native plant seeds for post-fire restoration, based on availability, adaptation (site potential), and probability of success. Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat objectives (see Table 2-6). In all cases, seed must be certified weed-free.	Action E-FFM 14: <u>TMA-4.2:</u> Continue the expansion of, and improvements to, the Nevada Division of Forestry Seedbank & Plant Material program in conjunction with Federal partners. Utilize Nevada Division of Forestry conservation camp crews for native seed collection and rehabilitation activities. Improve storage capabilities for native seed and desirable species that provide a competitive advantage over invasive species and improve storage	Action F-FFM 14: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				capabilities to promote longevity of available seed.	
Action A-FFM 15: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 15: —	Action: C-FFM 15 —	Action D-FFM 15: —	Action E-FFM 15: Following fires continue the expansion and implementation of sagebrush enhancement and restoration treatments consistent with GRSB management objectives in appropriate ecological sites.	Action F-FFM 15: —
Action A-FFM 16: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 16: —	Action C-FFM 16: —	Action D-FFM 16: In PPMAs and PGMAs, following post-fire restoration treatments, monitor and implement management actions as necessary to ensure long term persistence of seeded or pre-burn native plants.	Action E-FFM 16: <u>TMA-4.5</u> : Continue to focus research and monitoring efforts through demonstration projects on improving rehabilitation and revegetation successes in harsh environments.	Action F-FFM 16: —
Action A-FFM 17: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM 17: —	Action C-FFM 17: —	Action D-FFM 17: Within PPMAs and PGMAs, ensure that post-fire effectiveness monitoring continues until treatment objectives are met.	Action E-FFM 17: <u>TMA-1.1</u> : Utilize the Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team to collect and consolidate funding and develop common criteria and requirements for habitat protection, restoration and monitoring.	Action F-FFM 17: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM 18: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM 18: —	Action C-FFM 18: —	Action D-FFM 18: Increase post-fire restoration activities within PPMAs and PGMAs through the use of integrated funding opportunities with other resource programs and partners.	Action E-FFM 18: <u>TMA-1.1</u> : Utilize the Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team to collect and consolidate funding and develop common criteria and requirements for habitat protection, restoration and monitoring.	Action F-FFM 18: —
Action A-FFM 19: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM 19: —	Action C-FFM 19: —	Action D-FFM 19: BLM and Forest Service planning units (Districts and Forests), in coordination with the USFWS and relevant state agencies, would complete and continue to update GRSG Landscape Wildfire and Invasive Species Habitat Assessments to prioritize at risk habitats, and identify fuels management, preparedness, suppression and restoration priorities necessary to maintain sagebrush habitat to support interconnecting GRSG populations. These assessments and subsequent assessment updates would also be a coordinated effort with an interdisciplinary team to take into	Action E-FFM 19: See Role of Sagebrush Ecosystem Technical team.	Action F-FFM 19: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			account other GRSG priorities identified in this plan. <b>Appendix F</b> describes a minimal framework example and suggested approach for this assessment.		
Action A-FFM 20: No common action across LUPs within the sub-region. See Section 2.1.	Action B-FFM 20: —	Action C-FFM 20: —	Action D-FFM 20: PGMA near where PPMA has been burned by wildfire will be managed as PPMA until the burned GRSG habitat and use has been restored. The location and amount of PGMA to be managed as PPMA will be determined by the BLM or Forest Service and the respective state wildlife agency; in Nevada it will be determined by the Sagebrush Ecosystem Technical Team, based on site-specific evaluations.	Action E-FFM 20: —	Action F-FFM 20: —
<i>Hazardous Fuels Management</i>					
Action A-FFM-HFM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 1: —	Action C-FFM-HFM 1: —	Action D-FFM-HFM 1: Implement the RDFs identified in <b>Appendix A</b> .	Action E-FFM-HFM 1: See Role of Sagebrush Ecosystem Technical team.	Action F-FFM-HFM 1: —
Action A-FFM-HFM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 2: —	Action C-FFM-HFM 2: —	Action D-FFM-HFM 2: —	Action E-FFM-HFM 2: Limit the use of fire as a management tool in Wyoming Big Sagebrush and Black Sagebrush plant communities.	Action F-FFM-HFM 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 3: —	Action C-FFM-HFM 3: —	Action D-FFM-HFM 3: Utilizing an interdisciplinary approach, a full range of fuel reduction techniques will be available. Fuel reduction techniques such as grazing, prescribed fire, chemical, biological and mechanical treatments are acceptable.	Action E-FFM-HFM 3: <u>TMA-2.5</u> : Continue to identify State and County highway/road and utility ROWs for fuel breaks; replacing invasive, fire prone species with fire resistant species and performing other fuels reduction treatments.	Action F-FFM-HFM 3: —
Action A-FFM-HFM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 4: —	Action C-FFM-HFM 4: —	Action D-FFM-HFM 4: Identify opportunities for prescribed fire; including where prescribed fire has been identified as the most appropriate tool to meet fuels management objectives and GRSG conservation objectives, and the potential expansion or dominance of invasive species has been determined to be minimal through an invasive species risk determination for the treatment project (see BLM Manual Section 9015).	Action E-FFM-HFM 4: See Role of Sagebrush Ecosystem Technical team.	Action F-FFM-HFM 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 5: —	Action C-FFM-HFM 5: —	Action D-FFM-HFM 5: Upon project completion, monitor and manage fuels projects to ensure long-term success, including persistence of seeded species and/or other treatment components. Control invasive vegetation post-treatment.	Action E-FFM-HFM 5: See Role of Sagebrush Ecosystem Technical team.	Action F-FFM-HFM 5: —
Action A-FFM-HFM 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 6: —	Action C-FFM-HFM 6: —	Action D-FFM-HFM 6: Apply seasonal restriction, as needed, for implementing fuels management treatments according to the type of seasonal habitat present.	Action E-FFM-HFM 6: See Role of Sagebrush Ecosystem Technical team.	Action F-FFM-HFM 6: —
Action A-FFM-HFM 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 7: —	Action C-FFM-HFM 7: —	Action D-FFM-HFM 7: —	Action E-FFM-HFM 7: See Role of Sagebrush Ecosystem Technical team.	Action F-FFM-HFM 7: —
Action A-FFM-HFM 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 8: —	Action C-FFM-HFM 8: —	Action D-FFM-HFM 8: In coordination with FWS and relevant state agencies, BLM/Forest Service planning units (Districts/Forests) will identify annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments. Annual treatment needs will be coordinated across	Action E-FFM-HFM 8: TMA-1.7: Continue the expansion and implementation of proactive solutions that are market-based, flexible, and take advantage of economies of scale. An example is the “good of the state” contract for fire fuels reduction services initiated by the State Purchasing Division in November 2007 that facilitates the contracting for forest management	Action F-FFM-HFM 8: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			state/regional scales and across jurisdictional boundaries for long-term conservation of GRSG.	<p>hand crew services, forestry equipment, hauling services, road construction and rehabilitation, and controlled fire burns. Agencies within the state use these services including the Nevada Division of Forestry and the Tahoe Resource Team to meet fuel reduction objectives</p> <p><u>TMA-2.4:</u> Continue to support a business environment that incentivizes beneficial uses of biomass and excess fuels (e.g. stewardship contracting and landscape-level long-term projects).</p> <p><u>TMA-2.7:</u> Continue to utilize Nevada Division of Forestry conservation camp crews for fuels reduction project implementation and as federal grant match</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
<p>Action A-FFM-HFM 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b>.</p>	<p>Action B-FFM-HFM 9: In PPMA's, design and implement fuels treatments with an emphasis on protecting existing sagebrush ecosystems.</p> <ul style="list-style-type: none"> <li>Do not reduce sagebrush canopy cover to less than 15% (Connelly et al. 2000a; Hagen et al. 2007) unless a fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of PPMA's and conserve habitat quality for the species. Closely evaluate the benefits of the fuel break against the additional loss of sagebrush cover in future NEPA documents.</li> <li>Apply appropriate seasonal restrictions for implementing fuels management treatments according to the</li> </ul>	<p>Action C-FFM-HFM 9: Same as Alternative A.</p>	<p>Action D-FFM-HFM 9: Implementation actions will be tiered to the Local (District/Forest) GRSG Landscape Wildfire &amp; Invasive Species Assessment described in GEN-1, utilizing best available science related to the conservation of GRSG.</p>	<p>Action E-FFM-HFM 9: TMA-2.6: Continue to identify and utilize all cross-boundary authorities available to improve project coordination and implementation on the ground.</p>	<p>Action F-FFM-HFM 9: Design and implement fuels treatments with an emphasis on protecting existing sagebrush ecosystems.</p> <ul style="list-style-type: none"> <li>Do not reduce sagebrush canopy cover to less than 15% (Connelly et al. 2000a; Hagen et al. 2007) unless a fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of occupied GRSG habitat and conserve habitat quality for the species.</li> <li>Closely evaluate the benefits of the fuel break against the additional loss of sagebrush cover in the EA process.</li> <li>Apply appropriate seasonal restrictions for implementing fuels management treatments according to the type of seasonal habitats present.</li> <li>Allow no fuels treatments in known winter range unless the treatments are designed</li> </ul>



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>type of seasonal habitats present in a priority area.</p> <ul style="list-style-type: none"> <li>• Allow no fuels treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality.</li> <li>• Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species; Connelly et al. 2000a; Hagen et al. 2007; Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire for fuel breaks that would disrupt the fuel continuity</li> </ul>				<p>to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality.</p> <ul style="list-style-type: none"> <li>• Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species; Connelly et al. 2000a; Hagen et al. 2007; Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire for fuel breaks that would disrupt the fuel continuity across the landscape could be considered, in stands where cheatgrass is a very minor component in the understory (Brown 1982).</li> <li>• Design post fuels management projects to ensure long term persistence of seeded or pre-treatment native plants, including sagebrush. This may require temporary or long-term changes in livestock grazing</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>across the landscape could be considered, in stands where cheatgrass is a very minor component in the understory (Brown 1982).</p> <ul style="list-style-type: none"><li>● Monitor and control invasive vegetation post-treatment.</li><li>● Rest treated areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (WGFD 2011).</li><li>● Require use of native seeds for fuels management treatment based on availability, adaptation (site potential), and probability of success (Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat</li></ul>				<p>management, wild horse and burro management, travel management, or other activities to achieve and maintain the desired condition of the fuels management project (Eiswerth and Shonkwiler 2006).</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>objectives (Pyke 2011).</p> <ul style="list-style-type: none"> <li>Design post fuels management projects to ensure long term persistence of seeded or pre-treatment native plants. This may require temporary or long-term changes in livestock grazing management, wild horse and burro management, travel management, or other activities to achieve and maintain the desired condition of the fuels management project (Eiswerth and Shonkwiler 2006).</li> </ul>				
Action A-FFM-HFM 10: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM-HFM 10: —	Action C-FFM-HFM 10: Lands will be managed to be in the good or better ecological condition to help minimize adverse impacts of fire.	Action D-FFM-HFM 10: —	Action E-FFM-HFM 10: —	Action F-FFM-HFM 10: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 11: —	Action C-FFM-HFM 11: Any fuels treatments will focus on interfaces with human habitation or significant existing disturbances.	Action D-FFM-HFM 11: —	Action E-FFM-HFM 11: —	Action F-FFM-HFM 11: —
Action A-FFM-HFM 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 12: Design fuels management projects in PPMAs to strategically and effectively reduce wildfire threats in the greatest area. This may require fuels treatments implemented in a more linear versus block design (Launchbaugh et al. 2007).	Action C-FFM-HFM 12: Same as Alternative A.	Action D-FFM-HFM 12: —	Action E-FFM-HFM 12: <u>TMA-2.9</u> : Review current processes and, if necessary, the Federal agencies should obtain authority and expedite the process to implement vegetative treatments for fuels reduction projects in strategic areas for protection of sagebrush habitat	Action F-FFM-HFM 12: —
Action A-FFM-HFM 13: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 13: During fuels management project design, consider the utility of using livestock to strategically reduce fine fuels (Diamond et al. 2009), and implement grazing management that will accomplish this objective (Davies et al. 2011; Launchbaugh et al. 2007). Consult with ecologists to minimize impacts on native perennial grasses.	Action C-FFM-HFM 13: Same as Alternative A.	Action D-FFM-HFM 13: —	Action E-FFM-HFM 13: <u>TMA-2.10</u> : Review current processes and, if necessary, develop authorities and expedite the process to utilize a suite of active vegetative treatments (e.g. mechanical, targeted livestock grazing, prescribed fire, and chemical) to reduce weed invasion and maintain resilient post-fire landscapes and control excessive fuel loading throughout SGMAs and constructed fuel breaks.	Action F-FFM-HFM 13: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 14: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 14: —	Action C-FFM-HFM 14: —	Action D-FFM-HFM 14: —	Action E-FFM-HFM 14: Manage wildland fires in SGMAs to reduce the number of wildfires that escape initial attack and become greater than 300 acres down to two to three percent of all wildfire ignitions over a ten year period. In this context, fire should not be used in Phase III Pinyon-Juniper areas due to a lack of a sufficient sagebrush seed stock in the ground.	Action F-FFM-HFM 14: —
Action A-FFM-HFM 15: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 15: —	Action C-FFM-HFM 15: —	Action D-FFM-HFM 15: —	Action E-FFM-HFM 15: Identify and develop suppression plans, including mapping of SGMAs, to improve initial attack suppression actions.	Action F-FFM-HFM 15: —
Action A-FFM-HFM 16: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 16: —	Action C-FFM-HFM 16: —	Action D-FFM-HFM 16: —	Action E-FFM-HFM 16: Increase initial attack capability by training and equipping volunteer firefighters, as well as agricultural and other industry work forces for assignment during periods of high fire activity. Trained volunteers who are remotely located will serve as first responders when necessary and appropriate.	Action F-FFM-HFM 16: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 17: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 17: —	Action C-FFM-HFM 17: —	Action D-FFM-HFM 17: —	Action E-FFM-HFM 17: Integrate suppression resource locations within SGMAs and pre-position resources as conditions dictate.	Action F-FFM-HFM 17: —
Action A-FFM-HFM 18: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 18: In PPMAs, prioritize suppression, immediately after life and property, to conserve the habitat.	Action C-FFM-HFM 18: Same as Alternative A.	Action D-FFM-HFM 18: Fire fighter and public safety are the highest priority. GRSg habitat will be prioritized commensurate with property values and other critical habitat to be protected, with the goal to restore, enhance, and maintain areas suitable for GRSg.	Action E-FFM-HFM 18: <u>TMA-3</u> : Manage wildland fires in SGMAs to reduce the number of wildfires that escape initial attack and become greater than 300 acres down to two to three percent of all wildfire ignitions over a ten year period. In this context, fire should not be used in Phase III Pinyon-Juniper areas due to a lack of a sufficient sagebrush seed stock in the ground.	Action F-FFM-HFM 18: Same as Alternative B.
Action A-FFM-HFM 19: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 19: In PGMA's, prioritize suppression where wildfires threaten PPMAs.	Action C-FFM-HFM 19: Same as Alternative A.	Action D-FFM-HFM 19: —	Action E-FFM-HFM 19: <u>TMA-3</u> : Manage wildland fires in SGMAs to reduce the number of wildfires that escape initial attack and become greater than 300 acres down to two to three percent of all wildfire ignitions over a ten year period. In this context, fire should not be used in Phase III Pinyon-Juniper areas due to a lack of a sufficient sagebrush seed stock in the ground.	Action F-FFM-HFM 19: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 20: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 20: Follow BMPs (WO IM 2013-128).	Action C-FFM-HFM 20: Same as Alternative A.	Action D-FFM-HFM 20: Implement the RDFs identified in Appendix A.	<p>Action E-FFM-HFM 20: TMA-5: Through the Nevada Sagebrush Ecosystem Council, utilizing the “avoid, minimize and mitigate” strategy, and with the goal of restoring the appropriate role of wildfire, the following successful Nevada Division of Forestry programs that are a benefit to GRSG will continue:</p> <p><u>TMA-5.1:</u> Continue statewide resource programs, including:</p> <ul style="list-style-type: none"> <li>• Native seed collection, cleaning, bagging, storage, and application with quad seeders and seed drills.</li> <li>• Private landowner technical assistance, project implementation and cost share grants for Pinyon-Juniper removal (Forest Health) in sagebrush habitats; fuels reduction; green stripping; prescribed fire; and related habitat improvements on nonfederal lands.</li> </ul>	Action F-FFM-HFM 20: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"><li>Federal and State land project implementation through contracts for numerous vegetation improvement projects, water developments, timber stand improvements, fuels reduction, green stripping, etc.</li></ul> <p><u>TMA-5.2:</u> Continue statewide fire programs, including:</p> <ul style="list-style-type: none"><li>Fuels reduction planning, technical assistance, cost share grants and project implementation on state and private lands as well as assisting federal agency projects.</li><li>The Nevada Division of Forestry Wildland Fire Program to improve wildfire management in participating counties through strengthened initial attack, landowner education, improved coordination with federal land managers, and fuels reduction.</li></ul>	



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p><u>TMA-5.3:</u> Continue the Nevada Division of Forestry Conservation Camp Program that:</p> <p>Provides a trained statewide labor force that can be utilized for numerous GRSG mitigation activities and for wildland fire suppression (State of Nevada 2004).</p>	
<p>Action A-FFM-HFM 21: No common action across LUPs within the sub-region. See <b>Section 2.1.</b></p>	<p>Action B-FFM-HFM 21: Prioritize native seed allocation for use in GRSG habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from Emergency Stabilization and Rehabilitation (ESR) (BLM) and/or Burn Area Emergency Rehabilitation (Forest Service) projects outside of PPMAs to those inside it. Use of native plant seeds for ESR or Burn Area Emergency Rehabilitation seedings is required based on availability, adaptation (site potential), and probability of success</p>	<p>Action C-FFM-HFM 21: Livestock and other disturbed areas will be seeded with local native ecotypes of shrubs, grasses and forbs.</p>	<p>Action D-FFM-HFM 21: In PPMAs and PGMAs, give preference to use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success. Where probability of success or adapted seed availability is low, nonnative seeds may be used as long as they support GRSG habitat objectives. Choose native plant species outlined in ESDs (Forest Service may use a similar process), where available, to re-vegetate sites. If the commercial supply of appropriate native seed/plants is limited, work with the BLM Native Plant</p>	<p>Action E-FFM-HFM 21: TMA-4.2: Continue the expansion of, and improvements to, the Nevada Division of Forestry Seedbank &amp; Plant Material program in conjunction with Federal partners. Utilize Nevada Division of Forestry conservation camp crews for native seed collection and rehabilitation activities. Improve storage capabilities for native seed and desirable species that provide a competitive advantage over invasive species and improve storage capabilities to promote longevity of available seed.</p> <p><u>TMA-4.3:</u> Continue developing plans and</p>	<p>Action F-FFM-HFM 21: Same as Alternative B.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	(Richards et al. 1998). Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat conservation objectives (Pyke 2011). Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts.		Materials Development Program or NRCS Plant Material Program through your respective State or Forest Supervisor's Office Plant Conservation Program Lead. If currently available supplies are limited, use the materials that provide the greatest benefit for GRSG. In all cases seed must be certified weed-free.	acquiring the necessary resources (e.g. seed collection, seeding equipment pools, and trained staff) for post-fire rehabilitation activities and warehouse viable seed stockpiles. (2012).	
Action A-FFM-HFM 22: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 22: Design post ESR and Burn Area Emergency Rehabilitation management to ensure long term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse and burro, and travel management, etc., to achieve and maintain the desired condition of ESR and Burn Area Emergency Rehabilitation projects to benefit	Action C-FFM-HFM 22: Same as Alternative A.	Action D-FFM-HFM 22: —	Action E-FFM-HFM 22: <u>TMA-4.1</u> : Complete burn severity assessments and identify ecological site potential in, and in proximity to, SGMAs to identify the areas with the highest potential for restoration of habitat functions following fires. Focus rehabilitation efforts on areas of highest potential success based ecological site conditions (soils, precipitation zone, and geography). Utilize revegetation seed mixtures that include native and adapted plant seed that will	Action F-FFM-HFM 22: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	GRSG (Eiswerth and Shonkwiler 2006).			quickly stabilize soils, help to provide long term hazardous fuels reduction, and increase ecosystem resiliency in appropriate locations.	
Action A-FFM-HFM 23: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 23: Consider potential changes in climate (Miller et al. 2011) when proposing post-fire seedings using native plants. Consider seed collections from the warmer component within a species' current range for selection of native seed. (Kramer and Havens 2009).	Action C-FFM-HFM 23: Same as Alternative A.	Action D-FFM-HFM 23: Same as Alternative A.	Action E-FFM-HFM 23: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFM-HFM 23: Same as Alternative B.
Action A-FFM-HFM 24: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 24: —	Action C-FFM-HFM 24: —	Action D-FFM-HFM 24: —	Action E-FFM-HFM 24: —	Action F-FFM-HFM 24: Establish and strengthen networks with seed growers to assure availability of native seed for ESR projects.
Action A-FFM-HFM 25: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 25: —	Action C-FFM-HFM 25: —	Action D-FFM-HFM 25: —	Action E-FFM-HFM 25: —	Action F-FFM-HFM 25: Post fire recovery must include establishing adequately sized exclosures (free of livestock grazing) that can be used to assess recovery.
Action A-FFM-HFM 26: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 26: —	Action C-FFM-HFM 26: —	Action D-FFM-HFM 26: —	Action E-FFM-HFM 26: —	Action F-FFM-HFM 26: Livestock grazing should be excluded from burned areas until woody and herbaceous plants achieve GRSG habitat objectives.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 27: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 27: —	Action C-FFM-HFM 27: —	Action D-FFM-HFM 27: —	Action E-FFM-HFM 27: —	Action F-FFM-HFM 27: Where burned GRSG habitat cannot be fenced from other unburned habitat, the entire area (e.g., allotment/pasture) should be closed to grazing until recovered.
Action A-FFM-HFM 28: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 28: —	Action C-FFM-HFM 28: Mowing of grass will be used in any fuel break fuels reduction project (roadsides or other areas).	Action D-FFM-HFM 28: —	Action E-FFM-HFM 28: —	Action F-FFM-HFM 28: —
Action A-FFM-HFM 29: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 29: —	Action C-FFM-HFM 29: —	Action D-FFM-HFM 29: —	Action E-FFM-HFM 29: Protect, maintain and improve sagebrush habitat statewide over time by treating, rehabilitating and restoring at least as many acres of Occupied/Suitable and Potential Habitat as are lost to wildfire.	Action F-FFM-HFM 29: —
Action A-FFM-HFM 30: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 30: —	Action C-FFM-HFM 30: —	Action D-FFM-HFM 30: —	Action E-FFM-HFM 30: Utilize the Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team to collect and consolidate funding and develop common criteria and requirements for habitat protection, restoration and monitoring.	Action F-FFM-HFM 30: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 31: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 31: —	Action C-FFM-HFM 31: —	Action D-FFM-HFM 31: —	Action E-FFM-HFM 31: Support the Nevada Division of Forestry’s “Wildland Fire Protection Program,” a statewide comprehensive wildfire management program that engages all interagency partners (federal, state & local), to reduce the threats of catastrophic wildfire, rapidly suppress wildfires, and rehabilitate lands damaged by wildfire.	Action F-FFM-HFM 31: —
Action A-FFM-HFM 32: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 32: —	Action C-FFM-HFM 32: —	Action D-FFM-HFM 32: —	Action E-FFM-HFM 32: Continue the expansion and implementation of proactive solutions that are market-based, flexible, and take advantage of economies of scale.	Action F-FFM-HFM 32: —
Action A-FFM-HFM 33: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 33: —	Action C-FFM-HFM 33: —	Action D-FFM-HFM 33: —	Action E-FFM-HFM 33: Continue successful landscape level habitat assessments in, and in proximity to, SGMAs to identify those habitat areas that are at the highest risk of wildland fire.	Action F-FFM-HFM 33: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 34: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 34: —	Action C-FFM-HFM 34: —	Action D-FFM-HFM 34: —	Action E-FFM-HFM 34: Continue to support a business environment that incentivizes beneficial uses of biomass and excess fuels (e.g. stewardship, contracting, and landscape-level long-term projects).	Action F-FFM-HFM 34: —
Action A-FFM-HFM 35: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 35: —	Action C-FFM-HFM 35: —	Action D-FFM-HFM 35: —	Action E-FFM-HFM 35: Continue to identify and utilize all cross-boundary authorities available to improve project coordination and implementation on the ground.	Action F-FFM-HFM 35: —
Action A-FFM-HFM 36: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 36: —	Action C-FFM-HFM 36: —	Action D-FFM-HFM 36: —	Action E-FFM-HFM 36: Continue to utilize Nevada Division of Forestry conservation camp crews for fuels reduction project implementation and as federal grant match.	Action F-FFM-HFM 36: —
Action A-FFM-HFM 37: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 37: —	Action C-FFM-HFM 37: —	Action D-FFM-HFM 37: —	Action E-FFM-HFM 37: Continue to successfully treat existing areas of invasive vegetative that pose a threat to SGMAs through the use of herbicides, fungicides or bacteria to control cheatgrass and medusahead infestations.	Action F-FFM-HFM 37: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 38: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 38: —	Action C-FFM-HFM 38: —	Action D-FFM-HFM 38: —	Action E-FFM-HFM 38: Update Fire Management Plans, dispatch run cards, and relevant agreements to ensure “closest forces” concepts are being utilized at all times, particularly nonfederal suppression resources (e.g. Nevada Division of Forestry helicopters, crews, and volunteer fire departments).	Action F-FFM-HFM 38: —
Action A-FFM-HFM 39: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 39: —	Action C-FFM-HFM 39: —	Action D-FFM-HFM 39: —	Action E-FFM-HFM 39: Establish and utilize IMTs for wildfires in SGMAs.	Action F-FFM-HFM 39: —
Action A-FFM-HFM 40: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 40: —	Action C-FFM-HFM 40: —	Action D-FFM-HFM 40: —	Action E-FFM-HFM 40: Develop a “suitcase” interagency suppression task force for pre-positioning during high wildfire hazard periods. Activate up to three interagency “suitcase” task forces and pre-position them during Red Flag and predicted lightning events in SGMAs for initial attack response.	Action F-FFM-HFM 40: —
Action A-FFM-HFM 41: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 41: —	Action C-FFM-HFM 41: —	Action D-FFM-HFM 41: —	Action E-FFM-HFM 41: Within SGMAs, eliminate the tactic of “burning out,” including backfiring unless there are direct life safety threats.	Action F-FFM-HFM 41: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 42: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 42: —	Action C-FFM-HFM 42: —	Action D-FFM-HFM 42: —	Action E-FFM-HFM 42: Designate Occupied and Suitable Habitat in SGMAs as a “high priority value” for suppression resource allocation in the Geographical Area Coordination Centers and within the FEMA Fire Management Assistance Grant criteria.	Action F-FFM-HFM 42: —
Action A-FFM-HFM 43: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 43: —	Action C-FFM-HFM 43: —	Action D-FFM-HFM 43: —	Action E-FFM-HFM 43: Utilize the interagency Fire Planning Assessment system to optimize utilization of fire suppression resources (e.g. engines, aircraft, water tenders, and hand crews). Fire Program Analysis enables local and national planners to evaluate the effectiveness of alternative fire management strategies for the purpose of meeting fire and land management goals and objectives	Action F-FFM-HFM 43: —
Action A-FFM-HFM 44: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 44: —	Action C-FFM-HFM 44: —	Action D-FFM-HFM 44: —	Action E-FFM-HFM 44: Encourage use of the State's Air National Guard C-130 Unit with the Modular Airborne Firefighting System (MAFFS) for aerial firefighting support.	Action F-FFM-HFM 44: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 45: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 45: —	Action C-FFM-HFM 45: —	Action D-FFM-HFM 45: —	Action E-FFM-HFM 45: Increase the fleet of available heavy air tankers and develop a system for prioritizing their use to fight fires when needed.	Action F-FFM-HFM 45: —
Action A-FFM-HFM 46: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 46: —	Action C-FFM-HFM 46: —	Action D-FFM-HFM 46: —	Action E-FFM-HFM 46: Eliminate policy and operational inconsistencies by returning jurisdiction over Nevada BLM lands that are currently managed by the California Surprise Field Office, placing that jurisdiction into the Carson City and Winnemucca Field Offices.	Action F-FFM-HFM 46: —
Action A-FFM-HFM 47: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 47: —	Action C-FFM-HFM 47: —	Action D-FFM-HFM 47: —	Action E-FFM-HFM 47: Develop a specific and concise package of information on SGMAs for incoming IMTs to ensure an understanding of Nevada conservation priorities that will be included in all Delegations of Authority and Fire Management Plans.	Action F-FFM-HFM 47: —
Action A-FFM-HFM 48: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 48: —	Action C-FFM-HFM 48: —	Action D-FFM-HFM 48: —	Action E-FFM-HFM 48: Assign a local, trained resource advisor with GRSG expertise on all fire suppression responses in SGMAs.	Action F-FFM-HFM 48: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 49: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 49: —	Action C-FFM-HFM 49: —	Action D-FFM-HFM 49: —	Action E-FFM-HFM 49: Carefully review and evaluate all burned areas within SGMAs in a timely manner to ascertain the reclamation potential for reestablishing GRSG habitat, enhancing ecosystem resiliency, and controlling invasive weed species.	Action F-FFM-HFM 49: —
Action A-FFM-HFM 50: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 50: —	Action C-FFM-HFM 50: —	Action D-FFM-HFM 50: —	Action E-FFM-HFM 50: Complete burn severity assessments and identify ecological site potential in, and in proximity to, SGMAs to identify the areas with the highest potential for restoration of habitat functions following fires. Focus rehabilitation efforts on areas of highest potential success based ecological site conditions (soils, precipitation zone, and geography). Utilize revegetation seed mixtures that include native and adapted plant seed that will quickly stabilize soils, help to provide long term hazardous fuels reduction, and increase ecosystem resiliency in appropriate locations.	Action F-FFM-HFM 50: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 51: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 51: —	Action C-FFM-HFM 51: —	Action D-FFM-HFM 51: —	Action E-FFM-HFM 51: Continue the expansion of, and improvements to, the Nevada Division of Forestry Seed Bank & Plant Material program in conjunction with Federal partners. Utilize Nevada Division of Forestry conservation camp crews for native seed collection and rehabilitation activities. Improve storage capabilities for native seed and desirable species that provide a competitive advantage over invasive species and improve storage capabilities to promote longevity of available seed.	Action F-FFM-HFM 51: —
Action A-FFM-HFM 52: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 52: —	Action C-FFM-HFM 52: —	Action D-FFM-HFM 52: —	Action E-FFM-HFM 52: Continue developing plans and acquiring the necessary resources (e.g. seed collection, seeding equipment pools, and trained staff) for post fire rehabilitation activities and warehouse viable seed stockpiles.	Action F-FFM-HFM 52: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 53: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 53: —	Action C-FFM-HFM 53: —	Action D-FFM-HFM 53: —	Action E-FFM-HFM 53: Continue identifying and obtaining funding opportunities from federal, state, local, industry and land users dedicated to implementing prioritized habitat enhancement, restoration, and conservation activities.	Action F-FFM-HFM 53: —
Action A-FFM-HFM 54: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 54: —	Action C-FFM-HFM 54: —	Action D-FFM-HFM 54: —	Action E-FFM-HFM 54: Continue to focus research and monitoring efforts through demonstration projects on improving rehabilitation and revegetation successes in harsh environments.	Action F-FFM-HFM 54: —
Action A-FFM-HFM 55: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 55: —	Action C-FFM-HFM 55: —	Action D-FFM-HFM 55: —	Action E-FFM-HFM 55: Continue statewide resource programs, including: <ul style="list-style-type: none"> <li>• Native seed collection, cleaning, bagging, storage, and application with quad seeders and seed drills.</li> <li>• Private landowner technical assistance, project implementation and cost share grants for Pinyon-Juniper removal (Forest Health) in sagebrush habitats;</li> </ul>	Action F-FFM-HFM 55: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>fuels reduction; green stripping; prescribed fire; and related habitat improvements on nonfederal lands.</p> <ul style="list-style-type: none"> <li>Federal and State land project implementation through contracts for numerous vegetation improvement projects, water developments, timber stand improvements, fuels reduction, green stripping, etc.</li> </ul>	
Action A-FFM-HFM 56: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM-HFM 56: —	Action C-FFM-HFM 56: —	Action D-FFM-HFM 56: —	<p>Action E-FFM-HFM 56: Continue statewide fire programs, including:</p> <ul style="list-style-type: none"> <li>Fuels reduction planning, technical assistance, cost share grants and project implementation on state and private lands as well as assisting federal agency projects.</li> <li>The Nevada Division of Forestry Wildland Fire Program to improve wildfire management in participating counties through strengthened initial attack, landowner</li> </ul>	Action F-FFM-HFM 56: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				education, improved coordination with federal land managers, and fuels reduction.	
Action A-FFM-HFM 57: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM-HFM 57: —	Action C-FFM-HFM 57: —	Action D-FFM-HFM 57: —	Action E-FFM-HFM 57: Continue the Nevada Division of Forestry Conservation Camp Program.	Action F-FFM-HFM 57: —
Action A-FFM-HFM 58: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM-HFM 58: —	Action C-FFM-HFM 58: —	Action D-FFM-HFM 58: —	<p>Action E-FFM-HFM 58: Continue the following statewide resource programs:</p> <ul style="list-style-type: none"> <li>• Nevada Department of Agriculture, per Nevada Revised Statute, is charged with enforcing regulation that require landowners to remove and or control invasive, noxious plants species that would otherwise alter habitat.</li> <li>• Biological control program that obtains, releases, and monitors a variety of agents (invertebrates &amp; fungi) which have been approved by USDA-APHIS, to control specific noxious weeds to restore and retain natural habitat.</li> </ul>	Action F-FFM-HFM 58: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<ul style="list-style-type: none"> <li>Seed lot inspections are conducted to ensure the viability of seed and the absence of invasive, noxious plant species for rangeland restoration projects conducted by the BLM, Forest Service, and other local agencies, governments and groups.</li> <li>Pesticide applicator education, training, and licensing to ensure that pesticide applications are conducted properly on and around habitat.</li> </ul>	
Action A-FFM-HFM 59: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFM-HFM 59: —	Action C-FFM-HFM 59: —	Action D-FFM-HFM 59: —	Action E-FFM-HFM 59: Continue Nevada Department of Agriculture statewide surveys for the detection of incipient invasive and noxious plants in conjunction with United States Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS) and the Nevada Department of Transportation.	Action F-FFM-HFM 59: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFM-HFM 60: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-HFM 60: —	Action C-FFM-HFM 60: —	Action D-FFM-HFM 60: —	Action E-FFM-HFM 60: Continue statewide Weed Seed Free Forage and Gravel Certification Program.	Action F-FFM-HFM 60: —
Climate Change					
Action A-FFM-CC 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-CC 1: —	Action C-FFM-CC 1: —	Action D-FFM-CC 1: Work cooperatively with multiple agencies and stakeholders to establish and maintain a network of climate monitoring sites and stations.	Action E-FFM-CC 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFM-CC 1: —
Action A-FFM-CC 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFM-CC 2: —	Action C-FFM-CC 2: —	Action D-FFM-CC 2: As climate change data become available through REAs or other ecological studies, identify areas of unfragmented GRSG habitat and key habitat linkages that provide the life-cycle and genetic transfer needs for GRSG. Manage the identified areas as PPMAs.	Action E-FFM-CC 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFM-CC 2: —
<b>Livestock Grazing</b>					
Action A-LG 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 1: —	Action C-LG 1: No grazing will be allowed in PPMAs. Livestock grazing will be phased out over a period of three years, in accordance with grazing regulations 4110.4-2.	Action D-LG 1: —	Action E-LG 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 1: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 2: Within PPMAs, incorporate GRSG habitat objectives and management considerations into all BLM and Forest Service grazing allotments through AMPs or permit renewals and/or Forest Service Annual Operating Instructions.	Action C-LG 2: —	<p>Action D-LG 2: Within PPMAs and PGMAs containing GRSG nesting habitat, implement the following management actions, if not meeting GRSG habitat objectives:</p> <ul style="list-style-type: none"> <li>• Provide periods of rest or deferment during critical herbaceous growth period</li> <li>• Limit grazing duration to allow plant growth sufficient to meet GRSG habitat objectives (see Table 2-6)</li> <li>• Employ herd management techniques to minimize impacts of livestock on nesting habitat during the nesting season (March 1 – June 30).</li> </ul>	Action E-LG 2: Implement appropriate prescribed grazing conservation actions at scales sufficient to influence a positive population response in occupied and suitable GRSG habitat, such as NRCS conservation Practice Standard 528 for prescribed grazing (NRCS 2011).	Action F-LG 2: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 3: In priority habitat, work cooperatively on integrated ranch planning within GRSG habitat so operations with deeded/BLM and/or Forest Service allotments can be planned as single units.	Action C-LG 3: —	Action D-LG 3: —	Action E-LG 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 3: Same as Alternative B.
Action A-LG 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 4: Prioritize completion of land health assessments (Forest Service may use other analyses) and processing grazing permits within PPMAs. Focus this process on allotments that have the best opportunities for conserving, enhancing or restoring habitat for GRSG. Utilize BLM Ecological Site Descriptions (ESDs) (Forest Service may use other methods) to conduct land health assessments to determine if standards of range-land health are being met.	Action C-LG 4: —	Action D-LG 4: Continue land health assessments on BLM public lands or other monitoring methods on Forest Service-administered lands in PPMAs and PGMAs to evaluate current conditions as compared to GRSG habitat objectives described in Table 2-6. Incorporate the results of BLM and Forest Service monitoring and land health assessments into future management applications to ensure progress toward meeting GRSG habitat objectives.	Action E-LG 4: <u>TMA-13</u> : On BLM- and Forest Service-administered lands, meet the standards for riparian vegetation such as outlined in the various RAC S&G for Ecological Health to meet the GRSG habitat requirements.	Action F-LG 4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG-5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG-5: In PPMAs, conduct land health assessments that include (at a minimum) indicators and measurements of structure/condition/ composition of vegetation specific to achieving GRSG habitat objectives (Doherty et al. 2011). If local/state seasonal habitat objectives are not available, use GRSG habitat recommendations from Connelly et al. 2000b and Hagen et al. 2007.	Action C-LG 5: —	Action D-LG 5: —	Action E-LG 5: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 5: Same as Alternative B.
Action A-LG 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 6: Develop specific objectives to conserve, enhance or restore PPMAs based on BLM ESDs (Forest Service may use other methods) and assessments (including within wetlands and riparian areas). If an effective grazing system that meets GRSG habitat requirements is not already in place, analyze at least one alternative that conserves, restores or enhances GRSG habitat in the NEPA	Action C-LG 6: —	Action D-LG 6: —	Action E-LG 6: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 6: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	document prepared for the permit renewal (Doherty et al. 2011; Williams et al. 2011).				
Action A-LG 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 7: In PPMAs, manage for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve GRSG seasonal habitat objectives.	Action C-LG 7: —	Action D-LG 7: —	Action E-LG 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 7: Manage for vegetation composition and structure consistent with ecological site potential and within the reference state to achieve GRSG habitat objectives.
Action A-LG 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 8: Implement management actions (grazing decisions, Annual Operating Instructions [Forest Service only], AMP/Conservation Plan development, or other agreements) to modify grazing management to meet seasonal GRSG habitat requirements (Connelly et al. 2011). Consider singly, or in combination, changes in: <ol style="list-style-type: none"> <li>1. Season or timing of use;</li> <li>2. Numbers of livestock (includes temporary</li> </ol>	Action C-LG 8: —	Action D-LG 8: —	Action E-LG 8: TMA-12: Ensure that existing grazing permits maintain or enhance SGMAs. Utilize livestock grazing when appropriate as a management tool to improve GRSG habitat quantity, quality or to reduce wildfire threats. Based on a comprehensive understanding of seasonal GRSG habitat requirements, and in conjunction with flexibility of livestock operators, encourage land management agencies to cooperatively make timely, seasonal range management decisions to respond to vegetation management	Action F-LG 8: Implement management actions (grazing decisions, AMP/Conservation Plan Development, or other plans or agreements) to modify grazing management to meet seasonal GRSG habitat requirements (Connelly et al. 2011). Consider singly, or in combination, changes in: <ol style="list-style-type: none"> <li>1. Season, timing, and/or frequency of livestock use</li> <li>2. Numbers/AUMs of livestock (includes temporary non-use or livestock removal)</li> <li>3. Distribution of livestock use</li> </ol>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>nonuse or livestock removal);</p> <p>3. Distribution of livestock use;</p> <p>4. Intensity of use; and</p> <p>5. Type of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats; Briske et al. 2011).</p>			objectives, including fuels reduction.	<p>4. Intensity of livestock use</p> <p>5. Type of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats; Briske et al. 2011).</p>
Action A-LG 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 9: During drought periods, prioritize evaluating effects of the drought in PPMAs relative to their needs for food and cover. Since there is a lag in vegetation recovery following drought (Thurrow and Taylor 1999; Cagney et al. 2010), ensure that post-drought management allows for vegetation recovery that meets GRSG needs in PPMAs.	Action C-LG 9: —	Action D-LG 9: —	Action E-LG 9: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 9: During drought periods, prioritize evaluating effects of drought in GRSG habitat areas relative to their biological needs, as well as drought effects on ungrazed reference areas. Since there is a lag in vegetation recovery following drought (Thurrow and Taylor 1999; Cagney et al. 2010), ensure that post-drought management allows for vegetation recovery that meets GRSG needs in GRSG habitat areas based on GRSG habitat objectives.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 10: Manage riparian areas and wet meadows for proper functioning condition or other similar methodology (Forest Service only) within PPMAs.	Action C-LG 10: —	Action D-LG 10: Manage riparian areas and wet meadows for proper functioning condition (Forest Service may use other analysis) within PPMAs and PGMAs.	Action E-LG 10: <u>TMA-12.2</u> : Grazing management strategies for riparian areas should, at a minimum, maintain or achieve riparian PFC. Specific management actions include riparian fencing to provide control of the season, duration or degree of herbivory, providing alternate water sources away from the riparian area, changing the grazing system, or other grazing management practices that promote herbage removal within acceptable limits.	Action F-LG 10: Same as Alternative B.
Action A-LG 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 11: Within PPMAs and PGMAs, manage wet meadows to maintain a component of perennial forbs with diverse species richness relative to site potential (e.g., reference state) to facilitate brood rearing. Also conserve or enhance these wet meadow complexes to maintain or increase amount of edge and cover within that edge to minimize elevated mortality during the late brood rearing period (Hagen et al.	Action C-LG 11: No similar action	Action D-LG 11: No similar action	Action E-LG 11: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 11: Within GRSG habitats, manage wet meadows to maintain a component of perennial forbs with diverse species richness and productivity relative to site potential (e.g., reference state) to facilitate brood rearing. Also conserve or enhance these wet meadow complexes to maintain or increase the amount of edge and cover within that edge to minimize elevated mortality during the late brood-rearing period (Hagen et al. 2007; Kolada et al. 2009; Atamian et al. 2010).

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	2007; Kolada et al. 2009a; Atamian et al. 2010).				
Action A-LG 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 12: Where riparian areas and wet meadows meet PFC or meet standards using other similar methodology (Forest Service only), strive to attain reference state vegetation relative to the ecological site description.	Action C-LG 12: —	Action D-LG 12: —	Action E-LG 12: <u>TMA-13</u> : On BLM- and Forest Service-administered lands, meet the standards for riparian vegetation such as outlined in the various RAC S&G for Ecological Health to meet the GRSG habitat requirements.	Action F-LG 12: Same as Alternative B.
Action A-LG 13: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 13: Within PPMAs, reduce hot season grazing on riparian and meadow complexes to promote recovery or maintenance of appropriate vegetation and water quality. Utilize fencing/herding techniques or seasonal use or livestock distribution changes to reduce pressure on riparian or wet meadow vegetation used by GRSG in the hot season (summer) (Aldridge and Brigham 2002; Crawford et al. 2004; Hagen et al. 2007).	Action C-LG 13: —	Action D-LG 13: In PPMAs and PGMAs, apply principles of prescriptive livestock grazing that control time and timing of grazing so that hot season use does not occur on an annual basis.	Action E-LG 13: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 13: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 14: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 14: Authorize new water development for diversion from spring or seep source only when PPMAs would benefit from the development. This includes developing new water sources for livestock as part of an AMP/conservation plan to improve GRSG habitat.	Action C-LG 14: —	Action D-LG 14: Authorize new water development for diversion from spring or seep source when PPMAs and PGMAAs would benefit from the development.	Action E-LG 14: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 14: Authorize no new water developments for diversion from spring or seep sources within GRSG habitat.
Action A-LG 15: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 15: Analyze springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within PPMAs. Make modifications where necessary, considering impacts on other water uses when such considerations are neutral or beneficial to GRSG.	Action C-LG 15: —	Action D-LG 15: —	Action E-LG 15: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 15: Analyze springs, seeps and associated water developments to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within GRSG habitats. Make modifications where necessary, including dismantling water developments.



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 16: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 16: In PPMAs, only allow treatments that conserve, enhance or restore GRSG habitat (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve GRSG habitat).	Action C-LG 16: —	Action D-LG 16: Unless targeted grazing is the preferred treatment, livestock grazing would not be authorized within treatment areas during implementation of each treatment. Any livestock grazing closure for the purpose of a vegetation treatment would be done through the grazing decision prior to treatment. Livestock grazing would be authorized to resume within a treatment project area after resource monitoring data verifies the treatment objectives are being met and an appropriate grazing regime has been developed.	Action E-LG 16: TMA-12: Ensure that existing grazing permits maintain or enhance SGMAs. Utilize livestock grazing when appropriate as a management tool to improve GRSG habitat quantity, quality or to reduce wildfire threats. Based on a comprehensive understanding of seasonal GRSG habitat requirements, and in conjunction with flexibility of livestock operators, encourage land management agencies to cooperatively make timely, seasonal range management decisions to respond to vegetation management objectives, including fuels reduction.	Action F-LG 16: Ensure that vegetation treatments create landscape patterns which most benefit GRSG. Only allow treatments that are demonstrated to benefit GRSG and retain sagebrush height and cover consistent with GRSG habitat objectives (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve GRSG habitat).
Action A-LG 17: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 17: Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to PPMAs to determine if they should be restored to sagebrush or habitat of higher quality for GRSG. If these seedings are part of	Action C-LG 17: —	Action D-LG 17: —	Action E-LG 17: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 17: Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to GRSG habitat to determine if they should be restored to sagebrush or habitat of higher quality for GRSG. If these seedings provide value in conserving or enhancing GRSG habitats, then no restoration would

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	an AMP/Conservation Plan or if they provide value in conserving or enhancing the rest of the PPMAs, then no restoration would be necessary. Assess the compatibility of these seedings for GRSG habitat or as a component of a grazing system during the land health assessments (or other analyses [Forest Service only]) (Davies et al. 2011).				be necessary. Assess the compatibility of these seedings for GRSG habitat during the land health assessments.
Action A-LG 18: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 18: In PPMAs, design any new structural range improvements and location of supplements (salt or protein blocks) to conserve, enhance, or restore GRSG habitat through an improved grazing management system relative to GRSG objectives. Structural range improvements, in this context, include but are not limited to: cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including	Action C-LG 18: Livestock infrastructure, including fences, spring developments, pipelines, stock ponds and other harmful facilities will be removed (active restoration).	Action D-LG 18: In PPMAs and PGMAs, assess and modify as needed existing structural range developments to make sure they conserve, enhance, or restore GRSG habitat.	Action E-LG 18: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 18: Avoid all new structural range developments in PPMAs and PGMAs unless independent peer-reviewed studies show that the range improvement structure benefits GRSG. Structural range developments, in this context, include but are not limited to cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction.				must be considered in the project planning process and monitored and treated post-construction. Consider the comparative cost of changing grazing management instead of constructing additional range developments.
Action A-LG 19: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 19: When developing or modifying water developments in PPMAs, use applicable BMPs (see Appendix C of NTT report) to mitigate potential impacts from West Nile virus (Clark et al. 2006; Doherty 2007; Walker et al. 2007; Walker and Naugle 2011).	Action C-LG 19: —	Action D-LG 19: Modify existing water development projects as needed or feasible to ensure riparian habitats in PPMAs and PGMAs are being maintained or improved.	Action E-LG 19: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 19: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 20: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 20: In PPMAs, evaluate existing structural range improvements and location of supplements (salt or protein blocks) to make sure they conserve, enhance or restore GRSG habitat.	Action C-LG 20: —	Action D-LG 20: Salting and supplemental feeding locations, livestock watering and handling facilities (corrals, chutes, etc.) would be located at least 1/2-mile from riparian zones, springs, and meadows, or active leks in PPMAs and PGMAs. The distance can be greater based on local conditions.	Action E-LG 20: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 20: Same as Alternative B.
Action A-LG 21: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 21: To reduce outright GRSG strikes and mortality, remove, modify or mark fences in high risk areas within PPMAs based on proximity to lek, lek size, and topography (Christiansen 2009; Stevens 2011).	Action C-LG 21: —	Action D-LG 21: Remove, modify, or mark permanent and/or temporary fences in areas of high risk for bird strikes within PPMAs and PGMAs.  Permanent and/or temporary fences would not be located on or across active GRSG leks. Remove and re-locate existing fences that are located on or across GRSG active leks.	Action E-LG 21: TMA-23: Existing land uses and landowner activities in GRSG habitat that do not require state agency review for consistency with the State of Nevada 2012 Plan include the following:  7. New fencing greater than 1.25 miles from leks and maintenance of existing fencing. For new fencing within 1.25 miles of leks, fences with documented high potential for strikes should be marked. ...	Action F-LG 21: Remove, modify or mark fences in areas of moderate or high risk of GRSG strikes within GRSG habitat based on proximity to lek, lek size, and topography (Christiansen 2009; Stevens 2011).

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 22: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 22: In PPMAs, monitor for, and treat invasive species associated with existing range improvements (Gelbard and Belnap 2003; Bergquist et al. 2007).	Action C-LG 22: —	Action D-LG 22: —	Action E-LG 22: TMA-2.8: Continue to successfully treat existing areas of invasive vegetative that pose a threat to SGMAs through the use of herbicides, fungicides or bacteria to control cheatgrass and medusahead infestations.	Action F-LG 22: Same as Alternative B.
Action A-LG 23: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 23: Maintain retirement of grazing privileges as an option in priority GRSG areas when the current permittee is willing to retire grazing on all or part of an allotment. Analyze the adverse impacts of no livestock use on wildfire and invasive species threats (Crawford et al. 2004) in evaluating retirement proposals.	Action C-LG 23: —	Action D-LG 23: Consider retirement of grazing privileges on all voluntary relinquishments in PPMAs and PGMAs where removal of livestock grazing would enhance the ability to achieve GRSG habitat objectives (see Table 2-6).	Action E-LG 23: —	Action F-LG 23: Same as Alternative B.
Action A-LG 24: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 24: —	Action C-LG 24: —	Action D-LG 24: Establish vegetation treatment project monitoring sites prior to project implementation. Measure project monitoring sites annually during the livestock grazing closure period.	Action E-LG 24: <u>TMA-22.2</u> : Monitoring of mitigation sites must be included in all plans, with consistent protocols to assess specific metrics and determine trends for habitat quantity/quality and GRSG populations.	Action F-LG 24: Any vegetation treatment plan must include pretreatment data on wildlife and habitat condition, establish nongrazing exclosures, and include long-term monitoring where treated areas are monitored for at least three years before grazing returns. Continue monitoring for five years after livestock are returned to the area, and compare

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
					to treated, ungrazed exclosures, as well as untreated areas.
Action A-LG 25: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 25: —	Action C-LG 25: —	Action D-LG 25: Within PPMAs and PGMAs, incorporate terms and conditions into grazing permits to meet GRSG habitat objectives (see Table 2-6).	Action E-LG 25: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 25: —
Action A-LG 26: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 26: —	Action C-LG 26: —	Action D-LG 26: Grazing permit transfers would not be approved without review of GRSG habitat conditions. Where GRSG objectives (See Table 2-6) are not being met in an allotment and causal factors are attributable to livestock grazing, adjust the annual grazing authorization or operating instructions to reflect the allowable use levels as identified in Table 2-7 prior to the next grazing season. The Habitat Assessment Framework will be the tool to determine the level to which standards are or not being met.	Action E-LG 26: —	Action F-LG 26: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 27: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 27: —	Action C-LG 27: —	Action D-LG 27: Utilize the GRSG habitat assessment framework and adjust terms and conditions in the grazing permit renewal process where GRSG objectives (See Table 2-6) are not being met in an allotment and causes are attributable to livestock grazing. Where habitat conditions as defined in Table 2-6 are not being met, and causal factors are attributable to livestock grazing, adjust the annual grazing authorization or operating instructions to reflect the allowable use levels as identified in Table 2-7 prior to the next grazing season. The Habitat Assessment Framework will be the tool to determine the level to which standards are or not being met.	Action E-LG 27: TMA-12: Ensure that existing grazing permits maintain or enhance SGMAs. Utilize livestock grazing when appropriate as a management tool to improve GRSG habitat quantity, quality or to reduce wildfire threats. Based on a comprehensive understanding of seasonal GRSG habitat requirements, and in conjunction with flexibility of livestock operators, encourage land management agencies to cooperatively make timely, seasonal range management decisions to respond to vegetation management objectives, including fuels reduction.	Action F-LG 27: —
Action A-LG 28: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 28: —	Action C-LG 28: —	Action D-LG 28: Under appropriate conditions implement <i>Drought Policy</i> (BLM 2011c) to protect GRSG PPMAs and PGMAs. Implement post-drought management to allow for vegetation recovery that meets GRSG life cycle needs in PPMAs and PGMAs.	Action E-LG 28: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 28: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 29: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 29: —	Action C-LG 29: —	Action D-LG 29: During the annual grazing application, work with permittees to avoid concentrated turn-out locations for livestock within approximately 3 miles of known lek areas during the March 1 to May 15 period. Avoid domestic sheep use and bedding areas, and herder camps within at least 1.24 miles (2 kilometers) of known lek locations. Utilize land features and roads on maps provided to the permittee to help demarcate livestock use avoidance areas. Require terms and conditions language for affected livestock grazing permits regarding livestock use during the lekking period.	Action E-LG 29: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG 29: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG 30: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LG 30: —	Action C-LG 30: —	Action D-LG 30: During the permit renewal process, include terms and conditions language regarding livestock use during the lekking period.	Action E-LG 30: Ensure that existing grazing permits maintain or enhance SGMAs. Utilize livestock grazing when appropriate as a management tool to improve GRSg habitat quantity, quality or to reduce wildfire threats. Based on a comprehensive understanding of seasonal GRSg habitat requirements, and in conjunction with flexibility of livestock operators, encourage land management agencies to cooperatively make timely, seasonal range management decisions to respond to vegetation management objectives, including fuels reduction.	Action F-LG 30: —
Action A-LG 31: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LG 31: —	Action C-LG 31: —	Action D-LG 31: —	Action E-LG 31: Ensure that existing grazing permits maintain or enhance SGMAs. Utilize livestock grazing when appropriate as a management tool to improve GRSg habitat quantity, quality or to reduce wildfire threats. Based on a comprehensive understanding of seasonal GRSg habitat requirements, and	Action F-LG 31: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				in conjunction with flexibility of livestock operators, encourage land management agencies to cooperatively make timely, seasonal range management decisions to respond to vegetation management objectives, including fuels reduction.	
Action A-LG 32: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 32: —	Action C-LG 32: —	Action D-LG 32: —	Action E-LG 32: Expand the promotion of proper livestock grazing practices that promote the health of perennial grass communities as this condition has been found to suppress the establishment of cheatgrass (Blank and Morgan 2012).	Action F-LG 32: —
Action A-LG 33: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 33: —	Action C-LG 33: —	Action D-LG 33: —	Action E-LG 33: Grazing management strategies for riparian areas should, at a minimum, maintain or achieve riparian PFC. Specific management actions include riparian fencing to provide control of the season, duration or degree of herbivory, providing alternate water sources away from the riparian area, changing the grazing system, or other grazing management practices that promote	Action F-LG 33: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				herbage removal within acceptable limits.	
Action A-LG 34: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG 34: —	Action C-LG 34: —	Action D-LG 34: —	Action E-LG 34: Identify and apply appropriate habitat management (e.g. livestock management and vegetation treatments), and nonlethal practices (e.g. control of artificial nest and roost sites) that decrease the effectiveness of predators.	Action F-LG 34: —
Climate Change					
Action A-LG-CC 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG-CC 1: —	Action C-LG-CC 1: —	Action D-LG-CC 1: As climate change data become available through REAs or other ecological studies, identify areas of unfragmented GRSG habitat and key habitat linkages that provide the life-cycle and genetic transfer needs for GRSG. Manage the identified areas as PPMAs.	Action E-LG-CC 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG-CC 1: —
Action A-LG-CC 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG-CC 2: —	Action C-LG-CC 2: —	Action D-LG-CC 2: Work cooperatively with multiple agencies and stakeholders to establish and maintain a network of climate monitoring sites and stations.	Action E-LG-CC 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-LG-CC 2: —
Drought					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LG-D 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LG-D 1: —	Action C-LG-D 1: —	Action D-LG-D 1: Due to drought conditions, changes in livestock management may be required to protect PPMAs. The Field Manager or the Forest Service District Ranger should encourage permittees to take voluntary measures to delay turnout, reduce numbers, and adjust livestock operations. Absent voluntary measures to change livestock management by permittees, the District Manager or Forest Service District Ranger would implement appropriate changes to livestock grazing through decision or Annual Operating Instructions	Action E-LG-D 1: See Role of Sagebrush Ecosystem Technical Team. —	Action F-LG-D 1: —
<b>Recreation and Visitor Services</b>					
No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-REC 1: Only allow BLM SRPs and Forest Service Recreation Special Use Authorizations (RSUAs) in PPMAs that have neutral or beneficial effects on PPMAs.	Action C-REC 1: Same as Alternative A.	Action D-REC 1: Allow SRPs and Forest Service Recreation Special Use Authorization (RSUA) in PPMAs and PGMAs that have neutral or beneficial effects on GRSG.	Action E-REC 1: Use the avoid, minimize, and mitigate concept to allow BLM SRPs and Forest Service Special Use Authorizations in priority and general habitat.	Action F-REC 1: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-REC 2: —	Action C-REC 2: Same as Alternative A.	Action D-REC 2: No new recreation facilities would be constructed in PPMAs and PGMAs (e.g. Campgrounds, day-use areas, scenic pullouts, and trailheads).	Action E-REC 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-REC 2: Seasonally prohibit camping and other nonmotorized recreation within 4 miles of active GRSG leks.
Action A-REC 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-REC 3: —	Action C-REC 3: —	Action D-REC 3: —	Action E-REC 3: In SGMAs, continue successful programs following the “avoid, minimize and mitigate” concept for recreation and OHV impacts on GRSG habitat.	Action F-REC 3: —
Action A-REC 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-REC 4: —	Action C-REC 4: —	Action D-REC 4: —	Action E-REC 4: Study the impact caused by recreational and OHV use in GRSG habitat.	Action F-REC 4: —
<b>Comprehensive Travel and Transportation Management</b>					
Action A-CTTM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 1: In PPMAs, limit motorized travel to existing roads, primitive roads, and trails at a minimum, until such time as travel management planning is complete and routes are either designated or closed.	Action C-CTTM 1: Motorized travel would be limited to existing roads, primitive roads, and trails in PPMAs.	Action D-CTTM 1: In plans that have been completed and are being implemented (e.g., Northeastern California and Forest Service plans), motorized travel would be limited to designated routes in PPMAs and PGMAs. In areas where travel planning has not been completed, motorized travel would be limited to existing routes in PPMAs and PGMAs.	Action E-CTTM 1: In occupied and suitable habitat, motorized travel should be limited until such time as implementation of travel planning using avoid, minimize and mitigation is completed.	Action F-CTTM 1: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-CTTM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 2: —	Action C-CTTM 2: —	Action D-CTTM 2: —	Action E-CTTM 2: Work collaboratively through LAWGs, State, and Federal agencies to designate OHV areas outside of SGMAs.	Action F-CTTM 2: —
Action A-CTTM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 3: —	Action C-CTTM 3: Same as Alternative A.	Action D-CTTM 3: —	Action E-CTTM 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 3: Prohibit new road construction within 4 miles of active GRSG leks, and avoid new road construction in PPMAs and PGMA.
Action A-CTTM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 4: In PPMAs, travel management should evaluate the need for permanent or seasonal road or area closures.	Action C-CTTM 4: Some roads that intrude into lek or winter habitats will be removed or seasonally closed.	Action D-CTTM 4: In PPMAs and PGMA, new travel management plans would evaluate vehicle routes and determine the need for permanent or seasonal road closures, and mode of travel (e.g. motorcycle, ATV, and UTV) restrictions, including noise levels and speed. Where such closures or restrictions are infeasible due to administrative or public need, consider re-routing road to improve or protect GRSG habitat. Periods of seasonal road closures would be identified in the travel management plan taking into account the adverse effect on the particular life-cycle need of GRSG in the	Action E-CTTM 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			area of the seasonal closure. Routes in PPMAs not required for public access or recreation with current administrative/agency purpose or need should be evaluate for administrative access only in the implementation-level transportation management plans.		
Action A-CTTM 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 5: Complete activity level travel plans within five years of the ROD. During activity level planning, where appropriate, designate routes in PPMAs with current administrative/agency purpose or need to administrative access only.	Action C-CTTM 5: Same as Alternative A.	Action D-CTTM 5: Same as Alternative A.	Action E-CTTM 5: <u>TMA-8.1</u> : Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible (State of Nevada 2012).	Action F-CTTM 5: Same as Alternative B.
Action A-CTTM 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 6: In PPMAs, limit route construction to realignments of existing designated routes if that realignment has a minimal impact on GRSG habitat, eliminates the need to construct a new road,	Action C-CTTM 6: Same as Alternative A.	Action D-CTTM 6: In PPMAs and PGMAs, no new roads would be allowed except those necessary for public safety, administrative or public need to accommodate valid existing rights. Limit route construction to realignments of existing routes if the realignment:	Action E-CTTM 6: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 6: Limit route construction to realignments of existing designated routes if that realignment has a minimal impact on GRSG habitat, eliminates the need to construct a new road, or is necessary for motorist safety. Mitigate any impacts with methods that have been demonstrated to

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	or is necessary for motorist safety.		<p>5) maintains or enhances PPMAs,</p> <p>6) eliminates the need to construct a new road, or</p> <p>7) is necessary for public safety,</p> <p>8) Minimize impacts on GRSG habitat through application of RDFs (see <b>Appendix A</b>) and other mitigation measures.</p>		be effective to offset the loss of GRSG habitat.
Action A-CTTM 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 7: In PPMAs, use existing roads, or realignments as described above to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in the priority area. If that disturbance exceeds 3 % for that area, then evaluate and implement additional, effective mitigation necessary to offset the resulting loss of	Action C-CTTM 7: Same as Alternative A.	Action D-CTTM 7: In PPMAs and PGMAs, access to valid existing rights would be addressed to provide the minimum access necessary to exercise the right and maintain or enhance GRSG habitat through mitigation necessary to off-set loss to PPMAs.	Action E-CTTM 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 7: Same as Alternative B using a 4-mile buffer from leks to determine road route.



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	GRSG habitat (see Objectives).				
Action A-CTTM 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 8: In PPMAs, allow no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless the upgrading would have minimal impact on GRSG habitat, is necessary for motorist safety, or eliminates the need to construct a new road.	Action C-CTTM 8: Same as Alternative A.	Action D-CTTM 8: In PPMAs and PGMAs, allow no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless the upgrade would maintain or enhance GRSG habitat, provide a fuel break to protect native vegetation, is necessary for public safety, or eliminates the need to construct a new road.	Action E-CTTM 8: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 8: Allow no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless it is necessary for motorist safety, or eliminates the need to construct a new road. Any impacts shall be mitigated with methods that have been demonstrated to be effective to offset the loss of GRSG habitat.
Action A-CTTM 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 9: In PPMAs, conduct restoration of roads, primitive roads and trails not designated in travel management plans. This also includes primitive route/roads that were not designated in WSAs and within lands with wilderness characteristics that have been selected for protection in previous LUPs.	Action C-CTTM 9: Same as Alternative A.	Action D-CTTM 9: In PPMAs and PGMAs, close primitive roads and trails not designated in travel management plans so they are effectively closed to motorized travel.	Action E-CTTM 9: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 9: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-CTTM 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 10: When reseeding roads, primitive roads and trails in PPMAs, use appropriate seed mixes and consider the use of transplanted sagebrush.	Action C-CTTM 10: Same as Alternative A.	Action D-CTTM 10: In PPMAs and PGMAs, obliterate and seed roads, primitive roads and trails not designated in travel management plans, with appropriate seed mixes and transplanted sagebrush when applicable. Use fire resistant species to provide for fire breaks where appropriate. Seed must be certified weed-free.	Action E-CTTM 10: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 10: When reseeding closed roads, primitive roads and trails, use appropriate native seed mixes and require the use of transplanted sagebrush.
<b>Lands and Realty</b>					
<b>Land Use Authorizations</b>					
Action A-LR-LUA 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 1: Make PPMAs exclusion areas for new BLM ROW or Forest Service Special Use Authorization (SUA) permits. Consider the following exceptions: <ul style="list-style-type: none"> <li>• Within designated ROW or SUA corridors encumbered by existing ROW or SUA: new ROWs or SUAs may be co-located only if the entire footprint of the proposed project (including construction and staging), can be completed</li> </ul>	Action C-LR-LUA 1: New corridors/facilities New transmission corridors, ROWs for corridors (oil, gas, water/aquifer mining), and communication or other towers are prohibited in ACECs and PPMAs.  New corridors/facilities will be sited in nonhabitat and bundled with existing corridors to the maximum extent possible.	Action D-LR-LUA 1: Designate PPMAs as ROW avoidance areas for all other ROWs or SUAs.  Development within avoidance areas could occur if the development incorporates appropriate RDFs in design and construction (e.g. noise, tall structure, and seasonal restrictions) and development results in no net un-mitigated loss of PPMAs and PGMAs.  Subject to valid, existing rights: where new ROWs or SUAs associated with valid existing rights are	Action E-LR-LUA 1: TMA-8.2: Site new linear features in existing corridors or, at a minimum, co-locate with existing linear features in SGMAs.  Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat. This is similar to designation as ROW avoidance areas.	Action F-LR-LUA 1: PPMAs and PGMAs shall be exclusion areas for new ROWs permits. Consider the following exceptions: <ul style="list-style-type: none"> <li>• Within designated ROW corridors encumbered by existing ROW authorizations: new ROWs may be co-located only if the entire footprint of the proposed project (including construction and staging); can be completed within the existing disturbance associated with the authorized ROWs.</li> <li>• Subject to valid, existing rights: where new ROWs associated</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>within the existing disturbance associated with the authorized ROWs or SUAs.</p> <p>Subject to valid existing rights: where new ROWs or SUAs associated with valid existing rights are required, co-locate new ROWs or SUAs within existing ROWs or SUAs or where it best minimizes impacts on GRSG. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in the priority area. If that disturbance exceeds 3% for that area, then evaluate and implement additional effective mitigation on a case-by-case basis to offset the resulting loss of GRSG habitat.</p>		<p>required, co-locate new ROWs or SUAs within existing ROWs or SUAs to achieve no net un-mitigated loss of PPMAs.</p>		<p>with valid existing rights are required, co-locate new ROWs within existing ROWs or where it best minimizes Impacts on GRSG. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in the priority area. If that disturbance exceeds 3% for that area, then make additional mitigation that has been demonstrated to be effective to offset the resulting loss of GRSG habitat.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 2: Evaluate and take advantage of opportunities to remove, bury, or modify existing power lines within PPMAs.	Action C-LR-LUA 2: Same as Alternative A.	Action D-LR-LUA 2: Where appropriate, bury new and existing utility lines as mitigation unless not technically feasible.	<p>Action E-LR-LUA 2: See role of Sagebrush Ecosystem Technical Team.</p> <p>TMA-8: Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the State and Nation's renewable energy demands (State of Nevada 2012).</p> <p>TMA-8.1: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible (State of Nevada 2012).</p> <p>TMA-8.2: Site new linear features in existing corridors or, at a minimum, co-locate with existing linear features in SGMAs (State of Nevada 2012).</p>	Action F-LR-LUA 2: Same as Alternative B

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				TMA-8.4: Apply measures to deter raptor perching and raven nesting on elevated structures	
Action A-LR-LUA 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 3: Where existing leases or ROWs or SUAs have had some level of development (road, fence, well, etc.) and are no longer in use, reclaim the site by removing these features and restoring the habitat.	Action C-LR-LUA 3: Same as Alternative A.	Action D-LR-LUA 3: In PPMAs and PGMAs where existing ROWs or SUAs are no longer in use, coordinate with the lease holder or Forest Service Special Use Permit holder to relinquish the ROW or SUA and reclaim the site by removing overhead lines and other infrastructure.	Action E-LR-LUA 3: <u>TMA-8.3</u> : Aggressively engage in reclamation and weed control efforts during pre-and post-project construction (State of Nevada 2012).	Action F-LR-LUA 3: Same as Alternative B
Action A-LR-LUA 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 4: Planning Direction Note: Relocate existing designated ROW corridors crossing PPMAs void of any authorized ROWs, outside of the PPMA. If relocation is not possible, undesignate that entire corridor during the planning process.	Action C-LR-LUA 4: Same as Alternative A.	Action D-LR-LUA 4: —	Action E-LR-LUA 4: No similar Action.	Action F-LR-LUA 4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 5: Make PGMAs “avoidance areas” for new ROWs or SUAs.	Action C-LR-LUA 5: Same as Alternative A.	Action D-LR-LUA 5: Designate PGMAs as ROW avoidance areas for new communication site ROWs or SUAs.  Development within avoidance areas could occur if the development incorporates appropriate RFDs in design and construction (e.g. noise, tall structure, and seasonal restrictions) and development results in no net un-mitigated loss of PPMA or PGMAs.	Action E-LR-LUA 5: <u>TMA-18.2:</u> Aggressively engage in reclamation/weed control efforts during pre-and post-project construction  <u>TMA-18.3:</u> Apply measures to deter raptor perching and raven nesting on elevated structures (State of Nevada 2012).  <u>TMA-18.4:</u> In SGMAs, limit conflict through avoidance and minimization of impacts, adaptive management, and appropriate mitigation. All actions in Section 18 will be refined pursuant to the "Resource Selection Function Model" (Coates) and other best available science.  <u>TMA-18.5:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible  <u>TMA-18.7:</u> Aggressively engage in reclamation/weed control efforts during	Action F-LR-LUA 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>pre-and post-project construction.</p> <p><u>TMA-18.10:</u> Development or infrastructure features should not be placed within a 0.6 mile (1 km) radius around seeps, springs and wet meadows within identified brood rearing habitats wherever possible. These features can provide a competitive advantage for avian predators; therefore increasing GRSG mortality during a period when birds may be susceptible.</p> <p><u>TMA-18.11:</u> A company representative will provide environmental training to on-site personnel and be responsible for overseeing compliance with all protective measures and coordination in accordance with the permitting authority.</p> <p><u>TMA-18.12:</u> Vehicle trips shall be limited to those times that least impact nesting or wintering GRSG.</p> <p><u>TMA-18.13:</u> Current transmission and</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				generation siting and construction practices to be reviewed and potentially refined by the Nevada Sagebrush Ecosystem Council and Nevada Sagebrush Ecosystem Technical Team pursuant to the “Resource Selection Function Model” (Coates) and other best available science include proximity to active leks and nesting habitat, relation to migratory and nonmigratory populations, and relation to movement corridors.	
Action A-LR-LUA 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 6: Where new ROWs or SUAs are necessary in PGMAs, co-locate new ROWs or SUAs within existing ROWs or SUAs where possible.	Action C-LR-LUA 6: Same as Alternative A.	Action D-LR-LUA 6: In PPMAs and PGMAs, co-locate new utility (power, telephone, etc.) lines with other existing linear surface ROWs, such as roads and pipelines.	Action E-LR-LUA 6: <u>TMA-18.6</u> : Site new linear features in existing corridors or, at a minimum, co-locating with existing linear features in SGMAs.	Action F-LR-LUA 6: —
Action A-LR-LUA 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 7: —	Action C-LR-LUA 7: —	Action D-LR-LUA 7: Manage landfills and transfer stations on public lands to reduce opportunities for nesting, cover, or perches for predators. Identify and close trespass landfills and dumps on public lands.	Action E-LR-LUA 7: TMA-9.3: Continue successful programs that have eliminated external food sources for ravens, particularly landfills, waste transfer facilities, and road kill that subsidize raven populations. Enforce existing State laws that require daily covering of landfills. Continue to reduce and minimize	Action F-LR-LUA 7: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				external food sources for ravens: particularly landfills, waste transfer facilities, and road kill that subsidize raven populations. Continue to enforce existing State laws that require daily covering of landfills	
Action A-LR-LUA 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 8: —	Action C-LR-LUA 8: —	Action D-LR-LUA 8: —	Action E-LR-LUA 8: The Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team will meet energy goals and GRSG conservation measures through close coordination with all interest groups and adherence to NRS 701.610 (amended by the 2011 Nevada Legislature) that requires State agency review of all energy development proposals. Attention will be focused on the series of transmission corridors currently being studied to consider the longer term transmission needs required to meet the nation's renewable energy demands. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private	Action F-LR-LUA 8: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals.	
Action A-LR-LUA 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 9: —	Action C-LR-LUA 9: —	Action D-LR-LUA 9: —	Action E-LR-LUA 9: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.	Action F-LR-LUA 9: —
Action A-LR-LUA 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 10: —	Action C-LR-LUA 10: —	Action D-LR-LUA 10: —	Action E-LR-LUA 10: In SGMAs, limit conflict through avoidance and minimization of impacts, adaptive management, and appropriate mitigation. All actions in Section 18 will be refined pursuant to the "Resource Selection Function Model" (Coates) and other best available science.	Action F-LR-LUA 10: —
Action A-LR-LUA 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 11: —	Action C-LR-LUA 11: —	Action D-LR-LUA 11: —	Action E-LR-LUA 11: Energy developers will work closely with State and Federal agency experts to determine important nesting, brood rearing and winter habitats and avoid those areas.	Action F-LR-LUA 11: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 12: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 12: —	Action C-LR-LUA 12: —	Action D-LR-LUA 12: —	Action E-LR-LUA 12: A company representative will provide environmental training to on-site personnel and be responsible for overseeing compliance with all protective measures and coordination in accordance with the permitting authority.	Action F-LR-LUA 12: —
Action A-LR-LUA 13: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 13: —	Action C-LR-LUA 13: —	Action D-LR-LUA 13: —	Action E-LR-LUA 13: Vehicle trips shall be limited to those times that least impact nesting or wintering GRSG.	Action F-LR-LUA 13: —
Action A-LR-LUA 14: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 14: —	Action C-LR-LUA 14: —	Action D-LR-LUA 14: —	Action E-LR-LUA 14: Current transmission and generation siting and construction practices to be reviewed and potentially refined by the Nevada Sagebrush Ecosystem Council and Nevada Sagebrush Ecosystem Technical Team pursuant to the “Resource Selection Function Model” (Coates) and other best available science include proximity to active leks and nesting habitat, relation to migratory and nonmigratory populations, and relation to movement corridors.	Action F-LR-LUA 14: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 15: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 15: —	Action C-LR-LUA 15: —	Action D-LR-LUA 15: Eliminate existing raven nesting opportunities created by anthropogenic development on public lands (e.g., remove infrastructure, power line, and communication facilities no longer in service).	Action E-LR-LUA 15: See State raven control actions above.	Action F-LR-LUA 15: —
Action A-LR-LUA 16: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 16: —	Action C-LR- LUA 16: —	Action D-LR-LUA 16: In PPMAs and PGMA, require ROW holders to retro-fit existing power lines and other utility structure with perch-detering devices during ROW renewal process.	Action E-LR- LUA 16: TMA-8.4: Apply measures to deter raptor perching and raven nesting on elevated structures.	Action F-LR- LUA 16: —
Action A-LR- LUA 17: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR- LUA 17: —	Action C-LR- LUA 17: —	Action D-LR-LUA 17: —	Action E-LR- LUA 17: Development or infrastructure features should not be placed within a 0.6 mile (1 km) radius around seeps, springs and wet meadows within identified brood rearing habitats wherever possible. These features can provide a competitive advantage for avian predators; therefore increasing GRSG mortality during a period when birds may be susceptible.	Action F-LR- LUA 17: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR- LUA 18: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR- LUA 18: —	Action C-LR- LUA 18: —	Action D-LR-LUA 18: Do not designate new utility corridors in PPMAs and PGMAs.	Action E-LR- LUA 18: <u>TMA-18.6</u> : Site new linear features in existing corridors or, at a minimum, co-locating with existing linear features in SGMAs.	Action F-LR- LUA 18: —
Land Tenure					
Action A-LR-LT 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Action B-LR-LT 1: Retain public ownership of PPMAs. Consider exceptions where:</p> <ul style="list-style-type: none"> <li>There is mixed ownership, and land exchanges would allow for additional or more contiguous federal ownership patterns within the PPMA.</li> </ul> <p>Under PPMAs with minority federal ownership, include an additional, effective mitigation agreement for any disposal of federal land. As a final preservation measure consideration should be given to pursuing a permanent conservation easement.</p>	Action C-LR-LT 1: All public lands in ACECs, PPMAs, and identified restoration and rehab land areas will be retained in public ownership.	<p>Action D-LR-LT 1: Retain public ownership of PPMAs and PGMAs. Consider exceptions when:</p> <ul style="list-style-type: none"> <li>Disposal and/or acquisitions of public lands would allow for more contiguous federal ownership patterns within the GRSG habitat area, or where a land tenure adjustment would result in a net gain in amount or quality of GRSG habitat.</li> </ul>	Action E-LR-LT 1: No similar Action.	Action F-LR-LT 1: Same as Alternative B, without exceptions for disposal to consolidate ownership that would be beneficial to GRSG.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LT 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LT 2: Where suitable conservation actions cannot be achieved in PPMAs, seek to acquire state and private lands with intact subsurface mineral estate by donation, purchase or exchange in order to best conserve, enhance or restore GRSG habitat.	Action C-LR-LT 2: BLM and Forest Service will strive to acquire important private lands in BLM-designated ACECs and Forest Service GRSG Special Areas. Acquisition will be prioritized over easements.	Action D-LR-LT 2: Where significant conservation actions could be achieved in PPMAs, seek to acquire lands with intact subsurface mineral estate by donation, purchase, or exchange in order to best conserve, enhance or restore GRSG habitat.	Action E-LR-LT 2: PMA 3.3 and TMA-21.9: To ensure that mitigation efforts to create, restore or enhance habitat are not intentionally disturbed in the future, long-term conservation easements or a record of restrictive covenant should be established over the property. If public lands are used for mitigation purposes, adequate long-term maintenance or replacement of mitigation objectives must be considered while recognizing existing uses (State of Nevada 2012).	Action F-LR-LT 2: —
Withdrawals					
Action A-LR-W 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 1: Propose lands within PPMAs for mineral withdrawal.	Action C-LR-W 1: Same as Alternative A.	Action D-LR-W 1: Same as Alternative A.	Action E-LR-W 1: Through the Nevada Sagebrush Ecosystem Council, encourage the strong conservation ethic in the mining industry by implementing effective avoidance management, and enhancement and reclamation of disturbed lands to preserve, protect, and improve habitat in SGMAs. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved	Action F-LR-W 1: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals (State of Nevada 2012).</p> <p>TMA-15.3: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible (State of Nevada 2012).</p> <p>TMA-15.5: Aggressively engage in reclamation efforts as projects are completed, and target reclamation where the ecological site potential exists in SGMAs. Focus efforts on habitat that has the greatest potential for use by GRSG as guided by ecological site descriptions and other restoration priorities established by the Nevada Sagebrush Ecosystem Council (State of Nevada 2012).</p> <p>TMA-15.9: Differentiate between short-(exploration)</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				and long-term (active mining) impacts and manage timing of operations and physical disturbance accordingly (State of Nevada 2012).	
Action A-LR-W 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 2: In PPMAs, do not recommend withdrawal proposals not associated with mineral activity unless the land management is consistent with GRSG conservation measures. (For example; in a proposed withdrawal for a military training range buffer area, manage the buffer area with GRSG conservation measures.)	Action C-LR-W 2: Same as Alternative A.	Action D-LR-W 2: Same as Alternative A.	Action E-LR-W 2: —	Action F-LR-W 2: Do not approve withdrawal proposals not associated with mineral activity unless the land management is consistent with GRSG conservation measures. (For example; in a proposed withdrawal for a military training range buffer area, manage the buffer area with GRSG conservation measures that have been demonstrated to be effective.
Action A-LR-W 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 3: —	Action C-LR-W 3: ROWs will be amended to require features that enhance GRSG habitat security.  Existing designated corridors in BLM ACECs and Forest Service Special Areas may be accessed for maintenance.	Action D-LR-W 3: —	Action E-LR-W 3: —	Action F-LR-W 3: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-W 4: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-W 4: —	Action C-LR-W 4: —	<p>Action D-LR-W 4: In priority and general habitat, no new road ROWs would be authorized except those necessary for public safety or administrative or public need tied to valid existing rights. Limit route construction to realignments of existing ROWs if the realignment:</p> <p>4) maintains or enhances priority GRSG habitat,</p> <p>5) eliminates the need to authorize a new ROW to construct a new road, or</p> <p>6) is necessary for public safety,</p> <p>New ROW authorizations would be evaluated on a case-by-case basis. If new road construction is necessary, minimize impacts on GRSG habitat through application of RDFs and other mitigation measures.</p>	Action E-LR-W 4: <u>TMA-18.6:</u> Site new linear features in existing corridors or, at a minimum, co-locating with existing linear features in SGMA.	Action F-LR-W 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-W 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 5: —	Action C-LR-W 5: —	Action D-LR-W 5: Within PPMAs and PGMAs, allow industrial coal-fired or natural gas-fired energy facilities associated with existing industrial infrastructure (e.g. a mine site) to provide on-site power generation.	Action E-LR-W 5 <u>TMA-8:</u> Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the State and Nation’s renewable energy demands (State of Nevada 2012).  <u>TMA-8.1:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.	Action F-LR-W 5: —
Action A-LR-W 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 6: —	Action C-LR-W 6: —	Action D-LR-W 6: Lands that are acquired (exchange, purchase or easement) for GRSG habitat, would be managed as PPMAs.	Action E-LR-W 6: —	Action F-LR-W 6: —
Wind Energy Development					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-WED 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-WED 1: —	Action C-LR-WED 1: —	Action D-LR-WED 1: Designate PPMAs and PGMAs as ROW exclusion for utility-scale commercial wind energy facilities (facilities that generate large amounts of electricity that is delivered to many users through transmission and distribution systems).	Action E-LR-WED 1: TMA-18: The Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team will meet energy goals and GRSG conservation measures through close coordination with all interest groups and adherence to NRS 701.610 (amended by the 2011 Nevada Legislature) that requires State agency review of all energy development proposals. Attention will be focused on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the nation's renewable energy demands. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been	Action F-LR-WED 1: Do not site wind energy development in PPMAs and PGMAs (Jones 2012).

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				stipulated in the projects' approvals.  TMA-18.1: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.	
Action A-LR-WED 2: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-WED 2: —	Action C-LR-WED 2: —	Action D-LR-WED 2: —	Action E-LR-WED 2: —	Action F-LR-WED 2: Site wind energy development at least five miles from active GRSG leks.
Action A-LR-WED 3: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-WED 3: —	Action C-LR-WED 3: —	Action D-LR-WED 3: Within PPMAs and PGMAs allow industrial wind facilities associated with existing industrial infrastructure (e.g. a mine site) to provide on-site power generation.	Action E-LR-WED 3: TMA-8: Through the Nevada Sagebrush Ecosystem Council, meet both renewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the renewable energy demands.	Action F-LR-WED 3: —
Industrial Solar					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-IS 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-IS 1: —	Action C-LR-IS 1: Industrial solar projects will be prohibited in ACECs and PPMAs.	Action D-LR-IS 1: Designate PPMAs and PGMAs as ROW exclusion for utility-scale solar energy facilities.	Action E-LR-IS 1: TMA-18: The Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team will meet energy goals and GRSG conservation measures through close coordination with all interest groups and adherence to NRS 701.610 (amended by the 2011 Nevada Legislature) that requires State agency review of all energy development proposals. Attention will be focused on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the nation's renewable energy demands. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been	Action F-LR-IS 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>stipulated in the projects' approvals.</p> <p><u>TMA-18.1:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in nonhabitat wherever possible.</p>	
<p>Action A-LR-IS 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b>.</p>	Action B-LR-IS 2: —	Action C-LR-IS 2: —	<p>Action D-LR-IS 2: Within PPMAs and PGMAs, allow industrial solar energy facilities associated with existing industrial infrastructure (e.g. a mine site) to provide on-site power generation.</p>	<p>Action E-LR-IS 2: <u>TMA-8:</u> Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the State and Nation's renewable energy demands (State of Nevada 2012).</p> <p><u>TMA-8.1:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.</p>	Action F-LR-IS 2: —
Urbanization					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-U 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-U 1: —	Action C-LR-U 1: —	Action D-LR-U 1: —	Action E-LR-U 1: TMA-20: When a county or city considers a change to its master plan for a land use of higher intensity affecting a SGMA, the county or city should consult with the Nevada Sagebrush Ecosystem Council through its Nevada Sagebrush Ecosystem Technical Team.	Action F-LR-U 1: —
De Minimis Activities					
Action A-LR-DMA 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-DMA 1: —	Action C-LR-DMA 1: —	Action D-LR-DMA 1: —	Action E-LR-DMA 1: TMA-23: Existing land uses and landowner activities in GRSG habitat that do not require state agency review for consistency with the State of Nevada 2012 Plan include the following: (State of Nevada 2012).  14) Existing animal husbandry practices including branding, docking, herding, trailing, etc.  15) Existing farming practices excluding conversion of sagebrush/grassland to agricultural lands.  16) Existing grazing operations that utilize recognized rangeland	Action F-LR-DMA 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>management practices included in AMPs, NRCS grazing plans, prescribed grazing plans, etc.</p> <p>17) Construction of agricultural reservoirs and aquatic habitat improvements of less than ten surface acres and drilling of agriculture and residential water wells including installation of tanks, water windmills and solar water pumps more than 0.6 miles from the perimeter of the lek. Within 0.6 miles from leks, no review is required if construction does not occur from March 15 to June 30 and construction does not occur on the lek. All water tanks shall have escape ramps.</p> <p>18) Agricultural and residential electrical distribution lines and substations more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur from March 15 to June 30 and construction does not occur on the lek. Raptor perching deterrents should be installed on all poles</p>	



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>within 0.6 miles from leks.</p> <p>19) Agricultural water pipelines if construction activities are more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur March 15 to June 30 and construction is reclaimed.</p> <p>20) New fencing greater than 1.25 miles from leks and maintenance of existing fencing. For new fencing within 1.25 miles of leks, fences with documented high potential for strikes should be marked.</p> <p>21) Irrigation (excluding the conversion of sagebrush-grassland to new irrigated lands).</p> <p>22) Spring development if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation.</p> <p>23) Herbicide use within existing road, pipeline and power line ROW. Herbicides application using spot treatment. Grasshopper/Mormon</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>cricket control following Reduced Agent-Area Treatments protocol.</p> <p>24) State and county road maintenance.</p> <p>25) Cultural resource pedestrian surveys.</p> <p>26) Emergency response.</p> <p>Note: Regarding #4, #5, and #6 above, The Nevada Sagebrush Ecosystem Technical Team will evaluate these actions and provide recommendation to the Nevada Sagebrush Ecosystem Council pursuant to any new information that is forthcoming from best available science and utilizing the "Resource Selection Function Model" (<i>Coates</i>).</p>	
Action A-LR-DMA 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-DMA 2: —	Action C-LR-DMA 2: —	Action D-LR-DMA 2: —	Action E-LR-DMA 2: TMA 23.1: On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements	Action F-LR-DMA 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				above and beyond what has already been stipulated in the projects' approvals.	
Leased Federal Fluid Mineral Estate					
Action A-FFME 1: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-FFME 1: In PPMAs, apply actions through LUP implementation decisions (e.g., approval of an Application for Permit to Drill, and Sundry Notice) and upon completion of the environmental record of review (43 CFR 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things:  1. Whether the conservation measure is “reasonable” (43 CFR 3101.1-2) with the valid existing rights; and  2. Whether the action is in conformance with the approved LUP.	Action C-FFME 1: Same as Alternative B.	Action D-FFME 1: —	Action E-FFME 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 1: Apply the following conservation measures as COAs at the project and well permitting stages, and through RMP implementation decisions and upon completion of the environmental record of review (43 CFR § 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things:  1. Whether the conservation measure is “reasonable” (43 CFR § 3101.1-2) with the valid existing rights; and  2. Whether the action is in conformance with the approved RMP.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFME 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 2: In PPMAs, provide the following conservation measures as terms and conditions of the approved LUP:  Do not allow new surface occupancy on federal leases within PPMAs, this includes winter concentration areas (Doherty et al. 2008; Carpenter et al. 2010) during any time of the year. Consider an exception: <ul style="list-style-type: none"><li>● If the lease is entirely within PPMAs, apply a 4-mile NSO around the lek, and limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section.</li><li>● If the entire lease is within the 4-mile lek perimeter, limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section. Require</li></ul>	Action C-FFME 2: Same as Alternative B.	Action D-FFME 2: —	Action E-FFME 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 2: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	any development to be placed at the most distal part of the lease from the lek, or, depending on topography and other habitat aspects, in an area that is less demonstrably harmful to GRSG.				
Action A-FFME 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 3: Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and early brood-rearing season in all PPMAs during this period.	Action C-FFME 3: Timing avoidance periods will be required.	Action D-FFME 3: Apply requisite seasonal restriction on exploratory drilling that prohibits surface-disturbing activities in winter habitat and during the lekking, nesting, and early brood-rearing season in all PPMAs. See <b>Appendix G</b> , Leasable Mineral Stipulations, Waivers, Modifications, and Exceptions.	Action E-FFME 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 3: Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and brood-rearing season in all PPMAs and PGMAs during this period. This seasonal restriction shall also to apply to related activities that are disruptive to GRSG, including vehicle traffic and other human presence.
Action A-FFME 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 4: BLM should closely examine the applicability of categorical exclusions in PPMAs. If extraordinary circumstances review is applicable, BLM should determine whether those circumstances exist.	Action C-FFME 4: Same as Alternative B.	Action D-FFME 4: —	Action E-FFME 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFME 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 5: Complete Master Development Plans in lieu of APD-by-APD processing for all but wildcat wells.	Action C-FFME 5: Same as Alternative B.	Action D-FFME 5: —	Action E-FFME 5: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 5: Same as Alternative B.
Action A-FFME 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Action B-FFME 6: When permitting APDs on existing leases that are not yet developed, the proposed surface disturbance cannot exceed 3% for that area. Consider an exception if:</p> <ul style="list-style-type: none"> <li>• Additional, effective mitigation is demonstrated to offset the resulting loss of GRSG (see Objectives).</li> <li>• When necessary, conduct additional, effective mitigation in 1) PPMAs or – less preferably – 2) PGMAs (dependent upon the area-specific ability to increase GRSG populations).</li> <li>• Conduct additional,</li> </ul>	Action C-FFME 6: Same as Alternative B.	<p>Action D-FFME 6: On leased federal fluid mineral estate, when permitting Master Development Plans in PPMAs on leases not yet developed, the proposed surface disturbance must achieve no net unmitigated loss of PPMAs. Apply requisite seasonal restrictions on exploratory drilling that prohibits surface-disturbing activities in winter habitat and during the lekking, nesting, and early brood-rearing season in all PPMAs.</p> <p>When necessary, prioritize and conduct additional mitigation:</p> <ul style="list-style-type: none"> <li>• Within the same population area where the impact is realized; or</li> <li>• Within the same WAFWA Management Zone as the impact</li> </ul>	Action E-FFME 6: See Role of Sagebrush Ecosystem Technical Team.	<p>Action F-FFME 6: When permitting APDs on existing leases that are not yet developed, the proposed surface disturbance cannot exceed 3% <u>per section</u> for that area.</p> <p>Consider an exception if:</p> <ul style="list-style-type: none"> <li>• Additional, effective mitigation is demonstrated to offset the resulting loss of GRSG (see Objectives).</li> <li>• When necessary, conduct additional, effective mitigation in PPMAs and PGMAs (dependent upon the area-specific ability to increase GRSG populations).</li> <li>• Conduct additional, effective mitigation first within the same population area where the impact is realized, and if not possible then conduct mitigation within the same Management Zone</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	effective mitigation first within the same population area where the impact is realized, and if not possible then conduct mitigation within the same Management Zone as the impact, per 2006 WAFWA Strategy – pg. 2-17.		unless greater population benefits can be realized outside the population area or WAFWA management zone, subject to BLM and State Wildlife agency consultation and agreement.		as the impact, per 2006 WAFWA Strategy – pg. 2-17.
Action A-FFME 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 7: Require unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring) to minimize adverse impacts on GRSG according to the Federal Lease Form, 3100-11, Sections 4 and 6.	Action C-FFME 7: Same as Alternative B.	Action D-FFME 7: —	Action E-FFME 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 7: Same as Alternative B.
Action A-FFME 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 8: Identify areas where acquisitions (including subsurface mineral rights) or conservation easements, would benefit GRSG habitat.	Action C-FFME 8: Same as Alternative B.	Action D-FFME 8: —	Action E-FFME 8: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 8: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action B-FFME 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 9: For future actions, require a full reclamation bond specific to the site in accordance with 43 CFR 3104.2, 3104.3, and 3104.5. Insure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000a, Hagen et al. 2007) that would result in full restoration of the lands to the condition it was found prior to disturbance. Base the reclamation costs on the assumption that contractors for the BLM or Forest Service will perform the work.	Action C-FFME 9: Same as Alternative B.	Action D-FFME 9: —	Action E-FFME 9: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 9: Same as Alternative B.
Action A-FFME 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 10: Make applicable BMPs (see Appendix D of the NTT Report) mandatory as COAs within priority GRSG habitat.	Action C-FFME 10: Same as Alternative B.	Action D-FFME 10: On leased federal fluid mineral estate (where no APD has been issued), RDFs would be attached as lease notices.	Action E-FFME 10: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 10: Same as Alternative B.
Action A-FFME 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 11: —	Action C-FFME 11: Agencies will explore options to amend, cancel, or buy out leases in ACECs and PPMAs.	Action D-FFME 11: —	Action E-FFME 11: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 11: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFME 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 12: —	Action C-FFME 12: Include conditions that require relinquishment of leases/authorizations if doing so will: 1) mitigate the impact of a proposed development, or 2) mitigate the unanticipated impacts of an approved development.	Action D-FFME 12: —	Action E-FFME 12: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 12: —
Action A-FFME 13: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 13: —	Action C-FFME 13: No waivers will be issued.	Action D-FFME 13: —	Action E-FFME 13: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 13: —
Action A-FFME 14: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 14: —	Action C-FFME 14: —	Action D-FFME 14: On leased federal fluid mineral estate within PPMAs complete Master Development Plans in lieu of APD-by-APD processing for all but wildcat wells.	Action E-FFME 14: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 14: —
Action A-FFME 15: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 15: —	Action C-FFME 15: —	Action D-FFME 15: On leased federal fluid mineral estate within PPMAs, require a full reclamation bond specific to the site. Insure bonds are sufficient for costs relative to reclamation that would result in full restoration. Base the reclamation costs on the assumption that contractors for the BLM will perform the work.	Action E-FFME 15: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 15: —
Fluid Minerals					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FM 1: Close PPMAs to fluid mineral leasing. Consider an exception when there is an opportunity for the BLM and Forest Service to influence conservation measures where surface and/or mineral ownership is not entirely federally owned (i.e., checkerboard ownership). In this case, a plan amendment may be developed that opens the priority area for new leasing. The plan must demonstrate long-term population increases in the priority area through mitigation (prior to issuing the lease) including lease stipulations, off-site mitigation, etc., and avoid short-term losses that put the GRSG population at risk from stochastic events leading to extirpation.	Action C-FM 1: Same as Alternative B.	Action D-FM 1: In un-leased federal fluid mineral estate in PPMAs apply a NSO stipulation and do not allow for waivers, exceptions, or modifications to that stipulation. Upon expiration or termination of existing leases within PPMAs, apply the same stipulation as above.	Action E-FM 1 B-FM 1: Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat. This is similar to designation as ROW avoidance areas.	Action F-FM 1: Close PPMAs and PGMAs to fluid mineral leasing. Consider an exception:  When there is an opportunity for the BLM to influence conservation measures where surface and/or mineral ownership is not entirely federally owned (i.e., checkerboard ownership). In this case, a plan amendment may be developed that opens GRSG habitat for new leasing. The plan must demonstrate long-term population increases in the priority area through mitigation (prior to issuing the lease) including lease stipulations, <u>and</u> off-site mitigation, etc., and avoid short-term losses that put the GRSG population at risk from stochastic events leading to extirpation.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FM 2: —	Action C-FM 2: —	Action D-FM 2: In un-leased federal fluid mineral estate in PGMAs, apply a NSO stipulation, but allow for waivers, exception, or modifications consistent with the objective. Upon expiration or termination of existing leases within PGMAs, apply the same stipulation as above.	Action E-FM 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-FM 2: —
Action A-FM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Action B-FM 3: Allow geophysical exploration within PPMAs to obtain exploratory information for areas outside of and adjacent to PPMAs.</p> <p>Only allow geophysical operations by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply.</p>	Action C-FM 3: Same as Alternative B.	<p>Action D-FM 3: Allow geophysical exploration within PPMAs and PGMAs that does not result in crushing of sagebrush vegetation or create new or additional surface disturbance. Heli-portable drilling methods, articulated rubber-tired vehicles that “leave no trace,” and vibro-seis geophysical operations conducted on existing roads and bladed shoulders would be allowed. Geophysical operations would be subject to TLs and CSU stipulations established for GRSG in PPMAs and PGMAs.</p> <p>Allow no use of surface shot methods within PPMAs.</p>	Action E-FM 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-FM 3: Allow geophysical exploration within PPMAs and PGMAs to obtain exploratory information for areas outside of and adjacent to PPMAs. Only allow geophysical operations by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood rearing and winter habitats during their season of use by GRSG.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FM 4: —	Action C-FM 4: —	Action D-FM 4: In un-leased federal fluid mineral estate in PGMAs, apply a NSO stipulation, but allow for waivers, exception, or modifications consistent with the objective. Upon expiration or termination of existing leases within PGMAs, apply the same stipulation as above.	Action E-FM 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-FM 4: —
<b>Locatable Minerals</b>					
Action A-LOC 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Action B-LOC 1: In PPMAs, propose withdrawal from mineral entry based on risk to the GRSG and its habitat from conflicting locatable mineral potential and development.</p> <ul style="list-style-type: none"> <li>• Make any existing claims within the withdrawal area subject to validity exams or buy out. Include claims that have been subsequently determined to be null and void in the proposed withdrawal.</li> <li>• In plans of operations required prior to any proposed</li> </ul>	Action C-LOC 1: Same as Alternative B.	<p>Action D-LOC 1: BLM Public Lands- Authorize locatable mineral development activity per the 43 CFR 3809 regulations through Plan of Operation Approvals and apply mitigation and GRSG BMPs that minimizes the loss of PPMAs or provides for enhancement of PPMAs through off-site mitigation within the WAFWA management zone.</p> <p>Forest Service: Require that new plans of operation on forest service-administered lands authorized under 36 CFR 228 Subpart A – Locatable Minerals, include measures to avoid or minimize adverse effects on</p>	<p>Action E-LOC 1: <u>TMA-15.3</u>: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.</p> <p>Proposed facilities and activities over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat.</p> <p><u>TMA-15.5</u>: Aggressively engage in reclamation efforts as projects are completed, and target reclamation where the ecological site potential exists in SGMAs. Focus efforts on habitat that has</p>	Action F-LOC 1: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>surface disturbing activities, include the following:</p> <ul style="list-style-type: none"> <li>• Additional, effective mitigation in perpetuity for conservation (In accordance with existing policy, WO IM 2008-204). Example: purchase private land and mineral rights or severed subsurface mineral rights within the priority area and deed to US Government).</li> <li>• Consider seasonal restrictions if deemed effective.</li> </ul>		GRSG populations or their habitat.	<p>the greatest potential for use by GRSG as guided by ecological site descriptions and other restoration priorities established by the Nevada Sagebrush Ecosystem Council.</p> <p><u>TMA-15.6:</u> Recognize that stipulations for other species (e.g. raptors) may impede the ability to effectively reclaim areas of impact and remove those barriers in order to achieve immediate and effective reclamation.</p> <p><u>TMA-15.7:</u> Prioritize areas for habitat improvement utilizing sound resource information including soil surveys, ecological site descriptions, and GRSG population data.</p> <p><u>TMA-15.8:</u> Design exploration projects for mineral access and the betterment of habitat. Ensure roads and other ancillary features that impact GRSG habitat are designed to avoid where feasible and otherwise minimize and mitigate impacts in the short and long term.</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				TMA-15.9: Differentiate between short-(exploration) and long-term (active mining) impacts and manage timing of operations and physical disturbance accordingly	
Action A-LOC 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 2: Make applicable BMPs (Appendix E of the NTT) mandatory as COAs within PPMAs.	Action C-LOC 2: Same as Alternative B.	Action D-LOC 2: —	Action E-LOC 2: TMA-15.1: Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMAs (State of Nevada 2012).	Action F-LOC 2: Same as Alternative B.
Action A-LOC 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 3: —	Action C-LOC 3: —	Action D-LOC 3: —	Action E-LOC 3: Through the Nevada Sagebrush Ecosystem Council, encourage the strong conservation ethic in the mining industry by implementing effective avoidance management, and enhancement and reclamation of disturbed lands to preserve, protect, and improve habitat in SGMAs. On federal lands, activities that have an approved BLM or Forest Service notice of intent, plan of operation, ROW, or drilling plan,	Action F-LOC 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals.	
Action A-LOC 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 4: —	Action C-LOC 4: —	Action D-LOC 4: —	Action E-LOC 4: Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMAs.	Action F-LOC 4: —
Action A-LOC 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 5: —	Action C-LOC 5: —	Action D-LOC 5: —	Action E-LOC 5: Consistent with BLM 43 CFR 3809 regulations for Notice-level operations, and Forest Service 36 CFR 228A regulations, governing mining and exploration, allow exploration and other mineral-related activities that create not more than five acres of surface disturbance. The BLM and Forest Service may exercise existing discretionary	Action F-LOC 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				authority to consider other information, including cumulative impacts.	
Action A-LOC 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 6: —	Action C-LOC 6: —	Action D-LOC 6: —	Action E-LOC 6: Recognize existing State and Federal regulatory mechanisms that govern mining and exploration activities, including BLM 43 CFR 3809 surface management regulations for hard rock mining, Forest Service 36 CFR 228A regulations governing mining and exploration, and NAC 519A regulations for reclamation of mining and exploration projects, that are adequate to conserve GRSG and sagebrush habitats in the interim until future Suitable conservation plans are approved by the Nevada Sagebrush Ecosystem Council.	Action F-LOC 6: —
Action B-LOC 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 7: —	Action B-LOC 7: —	Action B-LOC 7: —	Action B-LOC 7: Aggressively engage in reclamation efforts as projects are completed, and target reclamation where the ecological site potential exists in SGMAs. Focus efforts on habitat that has the greatest potential for use by GRSG as guided by ecological site descriptions and other	Action B-LOC 7: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				restoration priorities established by the Nevada Sagebrush Ecosystem Council.	
Action B-LOC 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 8: —	Action B-LOC 8: —	Action B-LOC 8: —	Action B-LOC 8: Recognize that stipulations for other species (e.g. raptors) may impede the ability to effectively reclaim areas of impact and remove those barriers in order to achieve immediate and effective reclamation.	Action B-LOC 8: —
Action B-LOC 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 9: —	Action B-LOC 9: —	Action B-LOC 9: —	Action B-LOC 9: Prioritize areas for habitat improvement utilizing sound resource information including soil surveys, ecological site descriptions, and GRSG population data.	Action B-LOC 9: —
Action B-LOC 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 10: —	Action B-LOC 10: —	Action B-LOC 10: —	Action B-LOC 10: Design exploration projects for mineral access and the betterment of habitat. Ensure roads and other ancillary features that impact GRSG habitat are designed to avoid where feasible and otherwise minimize and mitigate impacts in the short and long term	Action B-LOC 10: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LOC 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 11: —	Action C-LOC 11: —	Action D-LOC 11: —	Action E-LOC 11: Differentiate between short-(exploration) and long-term (active mining) impacts and manage timing of operations and physical disturbance accordingly.	Action F-LOC 11: —
Action A-LOC 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 12: —	Action C-LOC 12: —	Action D-LOC 12: Close or mitigate abandon mines sites within PPMAs and PGMAs to reduce predation of GRSG by eliminating physical structures that could provide nesting opportunities and perching sites for predators.	Action E-LOC 12: —	Action F-LOC 12: —
<b>Salable Minerals</b>					
Action A-SAL 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SAL 1: Close PPMAs to mineral material sales.	Action C-SAL 1: Same as Alternative B.	Action D-SAL 1: Allow no new salable mineral material sites in PPMAs and PGMAs.	Action E-SAL 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-SAL 1: Same as Alternative B.
Action A-SAL 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SAL 2: In PPMAs, restore salable mineral pits no longer in use to meet GRSG habitat conservation objectives.	Action C-SAL 2: Same as Alternative B.	Action D-SAL 2: In PPMAs, reclaim salable mineral materials sites no longer in use to meet GRSG habitat objectives (see Table 2-6).	Action E-SAL 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-SAL 2: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SAL 3: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-SAL 3: —	Action C-SAL 3: —	<p>Action D-SAL 3: On existing mineral materials sites, allow mineral materials sales in PPMAs and PGMAAs as required, to meet Federal, Tribal, State, County and public needs. Loss of habitat through disturbance in PPMAs and PGMAAs would be off-set through mitigation.</p> <p>Additional mitigation, including off-site mitigation would be required to off-set any net loss of habitat as a result of authorizing expansion of existing materials pits. Habitat loss in PPMAs and PGMAAs would be off-set through mitigation to ensure no net un-mitigated loss.</p> <p>All mineral materials activities would be subject to compliance with standard surface use stipulations (general occupancy, seasonal and yearlong TLs, and CSU stipulations) for GRSg in PPMAs and PGMAAs.</p>	Action E-SAL 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-SAL 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SAL 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SAL 4: —	Action C-SAL 4: —	Action D-SAL 4: Close or mitigate abandon mines sites within PPMAs and PGMAs to reduce predation of GRSG by eliminating physical structures that could provide nesting opportunities and perching sites for predators.	Action E-SAL 4: —	Action F-SAL 4: —
<b>Nonenergy Leasable Minerals</b>					
Action A-NEL 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-NEL 1: Close PPMAs to non-energy leasable mineral leasing. This includes not permitting any new leases to expand an existing mine.	Action C-NEL 1: Same as Alternative B.	Action D-NEL 1: Close PPMAs and PGMAs to non-energy leasable mineral leasing.	Action E-NEL 1: Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat. This is similar to designation as avoidance areas.	Action F-NEL 1: Same as Alternative B.
Action A-NEL 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-NEL 2: —	Action C-NEL 2: —	Action D-NEL 2: Issue no non-energy leasable prospecting permits within PPMAs and PGMAs.	Action E-NEL 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-NEL 2: —
Action A-NEL 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-NEL 3: For existing non-energy leasable mineral leases in PPMAs, in addition to the solid minerals BMPs (Appendix E of NTT), follow the same BMPs applied to Fluid Minerals (Appendix D of NTT), when wells are used for solution mining.	Action C-NEL 3: Same as Alternative B.	Action D-NEL 3: —	Action E-NEL 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-NEL 3: Same as Alternative B.
<b>Mineral Split Estate</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-MSE 1: Action A-MSE 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-MSE 1: Where the federal government owns the mineral estate in PPMAs, and the surface is in nonfederal ownership, apply the conservation measures applied on public lands.	Action C-MSE 1: Same as Alternative B.	Action D-MSE 1: Where the federal government owns the mineral estate in PPMAs and PGMAs and the surface is in nonfederal ownership and adjacent to public lands, apply the appropriate conservation measures and RDFs that are applied on public lands.	Action E-MSE 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-MSE 1: Same as Alternative B.
Action A-MSE 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-MSE 2: Where the federal government owns the surface, and the mineral estate is in nonfederal ownership in PPMAs, apply appropriate Fluid Mineral BMPs (see Appendix D of NTT) to surface development.	Action C-MSE 2: Same as Alternative B.	Action D-MSE 2: Where the federal government owns the surface and the mineral estate is in nonfederal ownership in PPMAs and PGMAs, apply appropriate surface use stipulations and RDFs to surface development.	Action E-MSE 2: Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat.	Action F-MSE 2: Same as Alternative B.
<b>Special Designations-Areas of Critical Environmental Concern (ACECs)</b>					
Action A-SD 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SD 1: —	Action C-SD 1: Designate the following proposed ACECs to preserve, protect, conserve, restore, and sustain GRSG populations and the sagebrush ecosystem on which the GRSG relies. <ul style="list-style-type: none"> <li>● Black Rock (132,400 acres)</li> <li>● Buffalo Skedaddle (1,033,000 acres)</li> </ul>	Action D-SD 1: Same as Alternative A.	Action E-SD 1: —	Action F-SD 1: Designate the following proposed ACECs (BLM) and Special Conservation Areas (Forest Service) as sagebrush reserves to conserve GRSG- and other sagebrush-dependent species. <ul style="list-style-type: none"> <li>● Bates Mountain (384,2200 acres)</li> <li>● Cortez Range (164,800 acres)</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"> <li>• Butte/Buck/White Pine (1,031,000 acres)</li> <li>• Clan Alpine (70,900 acres)</li> <li>• Cortez (127,300 acres)</li> <li>• Desatoya (170,800 acres)</li> <li>• Desert (557,100 acres)</li> <li>• East Valley (160,300 acres)</li> <li>• Fish Creek (50,600 acres)</li> <li>• Gollaher (597,700 acres)</li> <li>• Islands (112,600 acres)</li> <li>• Lincoln (280,200 acres)</li> <li>• Lone Willow (298,300 acres)</li> <li>• Massacre (987,700 acres)</li> <li>• Monitor 582,300 acres)</li> <li>• North Fork (827,900 acres)</li> </ul>			<ul style="list-style-type: none"> <li>• Fish Creek Mountains (70,100 acres)</li> <li>• Little Fish Lake Valley (122,700 acres)</li> <li>• Monitor (564,700 acres)</li> <li>• Monitor Valley (253,300 acres)</li> <li>• Reese River (109,600 acres)</li> <li>• Roberts Mountain (100,900 acres)</li> <li>• Telegraph Mountain (14,100 acres)</li> </ul> <p>Special Management: To protect the relevance and importance values of the GRSG and habitat, the following management prescriptions would apply:</p> <ul style="list-style-type: none"> <li>• Closed to cross country vehicle travel</li> <li>• Motorized and mechanized travel limited to designated routes. No new mechanized or motorized routes within 4 miles of leks or within PPMAs</li> <li>• Seasonally prohibit camping and</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"> <li>• O'Neil Basin (665,600 acres)</li> <li>• Pine Forest (46,800 acres)</li> <li>• Reese River 351,425 acres)</li> <li>• Ruby Valley (292,000 acres)</li> <li>• Santa Rosa (601,600 acres)</li> <li>• Schell Antelope (296,000 acres)</li> <li>• Shoshone (239,100 acres)</li> <li>• Snake (319,700 acres)</li> <li>• South Fork (223,500 acres)</li> <li>• Springs/Snake Valley (130,500 acres)</li> <li>• Steptoe Cave (184,500 acres)</li> <li>• Three Bar (417,500 acres)</li> <li>• Toiyabe (640,900 acres)</li> <li>• Tuscarora (442,000 acres)</li> </ul>			<p>nonmotorized recreation within 4 miles of active leks</p> <ul style="list-style-type: none"> <li>• Allow only SRPs that have demonstrated beneficial or neutral effects on PPMAs</li> <li>• Exclusion area for new ROWs in PPMAs</li> <li>• Avoidance area for new ROWs in PPMAs and PGMAs</li> <li>• Retain PPMAs in the ACECs in federal ownership</li> <li>• Prioritize acquisition of private lands in ACECs over easements</li> <li>• Mineral withdrawal for PPMAs in ACECs</li> <li>• Allow for vegetative management to be consistent with composition and structure in achieving habitat objectives</li> <li>• Allow for seasonal and timing restrictions in livestock grazing in the ACECs</li> <li>• When possible permanently retire</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"> <li>• Virginia (53,500 acres)</li> <li>• Vya (324,500 acres)</li> </ul> <p>Special Management: To protect the relevance and importance values of the GRSG and habitat, the following management prescriptions would apply:</p> <ul style="list-style-type: none"> <li>• Designate as Visual Resource Management (VRM) Class 1</li> <li>• No livestock grazing during lek and nesting periods</li> <li>• No livestock grazing during winter periods</li> <li>• Motorized travel would be limited to existing roads, primitive roads, and trails</li> <li>• Prohibit industrial wind and wind farm construction in ACEC or within 5-10 miles of ACEC boundary</li> <li>• Prohibit industrial solar projects within ACECs</li> </ul>			<p>grazing permits as opportunity arises</p> <ul style="list-style-type: none"> <li>• Manage riparian and wetland areas to meet proper functioning condition and maintain a component of perennial forbs with diverse species richness and productivity relative to site potential</li> <li>• Prohibit new water developments for diversion from springs or seeps within PPMAs and PGMAs</li> <li>• Closed to oil, gas and geothermal leasing in PPMAs and within 4 miles of active leks</li> <li>• Allow geophysical exploration outside of PPMAs using helicopter-portable drilling methods only and in accordance with seasonal timing restrictions or other restrictions that may apply</li> <li>• Do not use Categorical Exclusion to resolve Section 390 resource conflicts in PPMAs</li> <li>• Design and implement fuels treatments with</li> </ul>



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"><li>● Mineral withdrawal from PPMAs and targeted restoration habitat</li><li>● Require existing and future energy transmission lines in existing ROW corridors to acquire features to enhance GRSG habitat security</li><li>● Avoidance area for new ROWs and communication or other towers</li><li>● Protect Native American traditional and cultural sites and uses</li><li>● Retain all public lands in the ACECs in federal ownership</li><li>● Prioritize acquisition of private lands in ACECs over easements</li><li>● Minimal use of herbicides to control invasive and noxious weeds</li><li>● Closed for oil, gas and geothermal leasing within ACECs</li></ul>			emphasis on protecting existing sagebrush ecosystem

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"> <li>• Mineral withdrawal for ACECs and PPMAs</li> <li>• Allow locatable and nonlocatable mineral development in nonhabitat areas</li> <li>• Prohibit the use of helicopters in managing wild horse populations</li> </ul>			
Action A-CTTM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 1: In PPMAs, limit motorized travel to existing roads, primitive roads, and trails at a minimum, until such time as travel management planning is complete and routes are either designated or closed.	Action C-CTTM 1: Motorized travel would be limited to existing roads, primitive roads, and trails in PPMAs.	Action D-CTTM 1: In plans that have been completed and are being implemented (e.g., Northeastern California and Forest Service plans), motorized travel would be limited to designated routes in PPMAs and PGMA. In areas where travel planning has not been completed, motorized travel would be limited to existing routes in PPMAs and PGMA.	Action E-CTTM 1: In occupied and suitable habitat, motorized travel should be limited until such time as implementation of travel planning using avoid, minimize and mitigation is completed.	Action F-CTTM 1: Same as Alternative B.
Action A-CTTM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 2: —	Action C-CTTM 2: —	Action D-CTTM 2: —	Action E-CTTM 2: Work collaboratively through LAWGs, State, and Federal agencies to designate OHV areas outside of SGMAs.	Action F-CTTM 2: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-CTTM 3: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-CTTM 3: —	Action C-CTTM 3: Same as Alternative A.	Action D-CTTM 3: —	Action E-CTTM 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 3: Prohibit new road construction within 4 miles of active GRSG leks, and avoid new road construction in PPMAs and PGMAs.
Action A-CTTM 4: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-CTTM 4: In PPMAs, travel management should evaluate the need for permanent or seasonal road or area closures.	Action C-CTTM 4: Some roads that intrude into lek or winter habitats will be removed or seasonally closed.	Action D-CTTM 4: In PPMAs and PGMAs, new travel management plans would evaluate vehicle routes and determine the need for permanent or seasonal road closures, and mode of travel (e.g. motorcycle, ATV, and UTV) restrictions, including noise levels and speed. Where such closures or restrictions are infeasible due to administrative or public need, consider re-routing road to improve or protect GRSG habitat. Periods of seasonal road closures would be identified in the travel management plan taking into account the adverse effect on the particular life-cycle need of GRSG in the area of the seasonal closure. Routes in PPMAs not required for public access or recreation with current administrative/agency	Action E-CTTM 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			purpose or need should be evaluate for administrative access only in the implementation-level transportation management plans.		
Action A-CTTM 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 5: Complete activity level travel plans within five years of the ROD. During activity level planning, where appropriate, designate routes in PPMAs with current administrative/agency purpose or need to administrative access only.	Action C-CTTM 5: Same as Alternative A.	Action D-CTTM 5: Same as Alternative A.	Action E-CTTM 5: <u>TMA-8.1</u> : Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible (State of Nevada 2012).	Action F-CTTM 5: Same as Alternative B.
Action A-CTTM 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 6: In PPMAs, limit route construction to realignments of existing designated routes if that realignment has a minimal impact on GRSG habitat, eliminates the need to construct a new road, or is necessary for motorist safety.	Action C-CTTM 6: Same as Alternative A.	Action D-CTTM 6: In PPMAs and PGMAs, no new roads would be allowed except those necessary for public safety, administrative or public need to accommodate valid existing rights. Limit route construction to realignments of existing routes if the realignment: <ol style="list-style-type: none"> <li>1. maintains or enhances PPMAs,</li> <li>2. eliminates the need to construct a new road, or</li> </ol>	Action E-CTTM 6: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 6: Limit route construction to realignments of existing designated routes if that realignment has a minimal impact on GRSG habitat, eliminates the need to construct a new road, or is necessary for motorist safety. Mitigate any impacts with methods that have been demonstrated to be effective to offset the loss of GRSG habitat.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
			<p>3. is necessary for public safety,</p> <p>4. Minimize impacts on GRSG habitat through application of RDFs (see <b>Appendix A</b>) and other mitigation measures.</p>		
Action A-CTTM 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 7: In PPMAs, use existing roads, or realignments as described above to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in the priority area. If that disturbance exceeds 3 % for that area, then evaluate and implement additional, effective mitigation necessary to offset the resulting loss of GRSG habitat (see Objectives).	Action C-CTTM 7: Same as Alternative A.	Action D-CTTM 7: In PPMAs and PGMAs, access to valid existing rights would be addressed to provide the minimum access necessary to exercise the right and maintain or enhance GRSG habitat through mitigation necessary to off-set loss to PPMAs.	Action E-CTTM 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 7: Same as Alternative B using a 4-mile buffer from leks to determine road route.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-CTTM 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 8: In PPMAs, allow no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless the upgrading would have minimal impact on GRSG habitat, is necessary for motorist safety, or eliminates the need to construct a new road.	Action C-CTTM 8: Same as Alternative A.	Action D-CTTM 8: In PPMAs and PGMAs, allow no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless the upgrade would maintain or enhance GRSG habitat, provide a fuel break to protect native vegetation, is necessary for public safety, or eliminates the need to construct a new road.	Action E-CTTM 8: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 8: Allow no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless it is necessary for motorist safety, or eliminates the need to construct a new road. Any impacts shall be mitigated with methods that have been demonstrated to be effective to offset the loss of GRSG habitat.
Action A-CTTM 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 9: In PPMAs, conduct restoration of roads, primitive roads and trails not designated in travel management plans. This also includes primitive route/roads that were not designated in WSAs and within lands with wilderness characteristics that have been selected for protection in previous LUPs.	Action C-CTTM 9: Same as Alternative A.	Action D-CTTM 9: In PPMAs and PGMAs, close primitive roads and trails not designated in travel management plans so they are effectively closed to motorized travel.	Action E-CTTM 9: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 9: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-CTTM 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-CTTM 10: When reseeding roads, primitive roads and trails in PPMAs, use appropriate seed mixes and consider the use of transplanted sagebrush.	Action C-CTTM 10: Same as Alternative A.	Action D-CTTM 10: In PPMAs and PGMAs, obliterate and seed roads, primitive roads and trails not designated in travel management plans, with appropriate seed mixes and transplanted sagebrush when applicable. Use fire resistant species to provide for fire breaks where appropriate. Seed must be certified weed-free.	Action E-CTTM 10: See Role of Sagebrush Ecosystem Technical Team.	Action F-CTTM 10: When reseeding closed roads, primitive roads and trails, use appropriate native seed mixes and require the use of transplanted sagebrush.
<b>Lands and Realty</b>					
<b>Land Use Authorizations</b>					
Action A-LR-LUA 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 1: Make PPMAs exclusion areas for new BLM ROW or Forest Service SUA permits. Consider the following exceptions: <ul style="list-style-type: none"> <li>• Within designated ROW or SUA corridors encumbered by existing ROW or SUA: new ROWs or SUAs may be co-located only if the entire footprint of the proposed project (including construction and staging), can be completed within the existing disturbance</li> </ul>	Action C-LR-LUA 1: New corridors/facilities New transmission corridors, ROWs for corridors (oil, gas, water/aquifer mining), and communication or other towers are prohibited in ACECs and PPMAs.  New corridors/facilities will be sited in nonhabitat and bundled with existing corridors to the maximum extent possible.	Action D-LR-LUA 1: Designate PPMAs as ROW avoidance areas for all other ROWs or SUAs.  Development within avoidance areas could occur if the development incorporates appropriate RDFs in design and construction (e.g. noise, tall structure, and seasonal restrictions) and development results in no net un-mitigated loss of PPMAs and PGMAs.  Subject to valid, existing rights: where new ROWs or SUAs associated with valid existing rights are	Action E-LR-LUA 1: TMA-8.2: Site new linear features in existing corridors or, at a minimum, co-locate with existing linear features in SGMAs.  Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat. This is similar to designation as ROW avoidance areas.	Action F-LR-LUA 1: PPMAs and PGMAs shall be exclusion areas for new ROWs permits. Consider the following exceptions: <ul style="list-style-type: none"> <li>• Within designated ROW corridors encumbered by existing ROW authorizations: new ROWs may be co-located only if the entire footprint of the proposed project (including construction and staging); can be completed within the existing disturbance associated with the authorized ROWs.</li> <li>• Subject to valid, existing rights: where new ROWs associated</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>associated with the authorized ROWs or SUAs.</p> <p>Subject to valid existing rights: where new ROWs or SUAs associated with valid existing rights are required, co-locate new ROWs or SUAs within existing ROWs or SUAs or where it best minimizes impacts on GRSG. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in the priority area. If that disturbance exceeds 3% for that area, then evaluate and implement additional effective mitigation on a case-by-case basis to offset the resulting loss of GRSG habitat.</p>		<p>required, co-locate new ROWs or SUAs within existing ROWs or SUAs to achieve no net un-mitigated loss of PPMAs.</p>		<p>with valid existing rights are required, co-locate new ROWs within existing ROWs or where it best minimizes Impacts on GRSG. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the absolute minimum standard necessary, and add the surface disturbance to the total disturbance in the priority area. If that disturbance exceeds 3% for that area, then make additional mitigation that has been demonstrated to be effective to offset the resulting loss of GRSG habitat.</p>



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 2: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 2: Evaluate and take advantage of opportunities to remove, bury, or modify existing power lines within PPMAs.	Action C-LR-LUA 2: Same as Alternative A.	Action D-LR-LUA 2: Where appropriate, bury new and existing utility lines as mitigation unless not technically feasible.	Action E-LR-LUA 2: See role of Sagebrush Ecosystem Technical Team.  TMA-8: Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the State and Nation's renewable energy demands (State of Nevada 2012).  TMA-8.1: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible (State of Nevada 2012).  TMA-8.2: Site new linear features in existing corridors or, at a minimum, co-locate with existing linear features in SGMAs (State of Nevada 2012).	Action F-LR-LUA 2: Same as Alternative B

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				TMA-8.4: Apply measures to deter raptor perching and raven nesting on elevated structures	
Action A-LR-LUA 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 3: Where existing leases or ROWs or SUAs have had some level of development (road, fence, well, etc.) and are no longer in use, reclaim the site by removing these features and restoring the habitat.	Action C-LR-LUA 3: Same as Alternative A.	Action D-LR-LUA 3: In PPMAs and PGMAs where existing ROWs or SUAs are no longer in use, coordinate with the lease holder or Forest Service SUP holder to relinquish the ROW or SUA and reclaim the site by removing overhead lines and other infrastructure.	Action E-LR-LUA 3: <u>TMA-8.3</u> : Aggressively engage in reclamation and weed control efforts during pre-and post-project construction (State of Nevada 2012).	Action F-LR-LUA 3: Same as Alternative B
Action A-LR-LUA 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 4: Planning Direction Note: Relocate existing designated ROW corridors crossing PPMAs void of any authorized ROWs, outside of the PPMA. If relocation is not possible, undesignate that entire corridor during the planning process.	Action C-LR-LUA 4: Same as Alternative A.	Action D-LR-LUA 4: —	Action E-LR-LUA 4: No similar Action.	Action F-LR-LUA 4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 5: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 5: Make PGMAs “avoidance areas” for new ROWs or SUAs.	Action C-LR-LUA 5: Same as Alternative A.	Action D-LR-LUA 5: Designate PGMAs as ROW avoidance areas for new communication site ROWs or SUAs.  Development within avoidance areas could occur if the development incorporates appropriate RFDs in design and construction (e.g. noise, tall structure, and seasonal restrictions) and development results in no net un-mitigated loss of PPMA or PGMAs.	Action E-LR-LUA 5: <u>TMA-18.2:</u> Aggressively engage in reclamation/weed control efforts during pre-and post-project construction  <u>TMA-18.3:</u> Apply measures to deter raptor perching and raven nesting on elevated structures (State of Nevada 2012).  <u>TMA-18.4:</u> In SGMAs, limit conflict through avoidance and minimization of impacts, adaptive management, and appropriate mitigation. All actions in Section 18 will be refined pursuant to the "Resource Selection Function Model" (Coates) and other best available science.  <u>TMA-18.5:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible  <u>TMA-18.7:</u> Aggressively engage in reclamation/weed control efforts during	Action F-LR-LUA 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>pre-and post-project construction.</p> <p><u>TMA-18.10:</u> Development or infrastructure features should not be placed within a 0.6 mile (1 km) radius around seeps, springs and wet meadows within identified brood rearing habitats wherever possible. These features can provide a competitive advantage for avian predators; therefore increasing GRSG mortality during a period when birds may be susceptible.</p> <p><u>TMA-18.11:</u> A company representative will provide environmental training to on-site personnel and be responsible for overseeing compliance with all protective measures and coordination in accordance with the permitting authority.</p> <p><u>TMA-18.12:</u> Vehicle trips shall be limited to those times that least impact nesting or wintering GRSG.</p> <p><u>TMA-18.13:</u> Current transmission and</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				generation siting and construction practices to be reviewed and potentially refined by the Nevada Sagebrush Ecosystem Council and Nevada Sagebrush Ecosystem Technical Team pursuant to the “Resource Selection Function Model” (Coates) and other best available science include proximity to active leks and nesting habitat, relation to migratory and nonmigratory populations, and relation to movement corridors.	
Action A-LR-LUA 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 6: Where new ROWs or SUAs are necessary in PGMAs, co-locate new ROWs or SUAs within existing ROWs or SUAs where possible.	Action C-LR-LUA 6: Same as Alternative A.	Action D-LR-LUA 6: In PPMAs and PGMAs, co-locate new utility (power, telephone, etc.) lines with other existing linear surface ROWs, such as roads and pipelines.	Action E-LR-LUA 6: <u>TMA-18.6</u> : Site new linear features in existing corridors or, at a minimum, co-locating with existing linear features in SGMAs.	Action F-LR-LUA 6: —
Action A-LR-LUA 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 7: —	Action C-LR-LUA 7: —	Action D-LR-LUA 7: Manage landfills and transfer stations on public lands to reduce opportunities for nesting, cover, or perches for predators. Identify and close trespass landfills and dumps on public lands.	Action E-LR-LUA 7: <u>TMA-9.3</u> : Continue successful programs that have eliminated external food sources for ravens, particularly landfills, waste transfer facilities, and road kill that subsidize raven populations. Enforce existing State laws that require daily covering of landfills. Continue to reduce and minimize	Action F-LR-LUA 7: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				external food sources for ravens: particularly landfills, waste transfer facilities, and road kill that subsidize raven populations. Continue to enforce existing State laws that require daily covering of landfills	
Action A-LR-LUA 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 8: —	Action C-LR-LUA 8: —	Action D-LR-LUA 8: —	Action E-LR-LUA 8: The Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team will meet energy goals and GRSG conservation measures through close coordination with all interest groups and adherence to NRS 701.610 (amended by the 2011 Nevada Legislature) that requires State agency review of all energy development proposals. Attention will be focused on the series of transmission corridors currently being studied to consider the longer term transmission needs required to meet the nation's renewable energy demands. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private	Action F-LR-LUA 8: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals.	
Action A-LR-LUA 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 9: —	Action C-LR-LUA 9: —	Action D-LR-LUA 9: —	Action E-LR-LUA 9: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.	Action F-LR-LUA 9: —
Action A-LR-LUA 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 10: —	Action C-LR-LUA 10: —	Action D-LR-LUA 10: —	Action E-LR-LUA 10: In SGMAs, limit conflict through avoidance and minimization of impacts, adaptive management, and appropriate mitigation. All actions in Section 18 will be refined pursuant to the "Resource Selection Function Model" (Coates) and other best available science.	Action F-LR-LUA 10: —
Action A-LR-LUA 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LUA 11: —	Action C-LR-LUA 11: —	Action D-LR-LUA 11: —	Action E-LR-LUA 11: Energy developers will work closely with State and Federal agency experts to determine important nesting, brood rearing and winter habitats and avoid those areas.	Action F-LR-LUA 11: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 12: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 12: —	Action C-LR-LUA 12: —	Action D-LR-LUA 12: —	Action E-LR-LUA 12: A company representative will provide environmental training to on-site personnel and be responsible for overseeing compliance with all protective measures and coordination in accordance with the permitting authority.	Action F-LR-LUA 12: —
Action A-LR-LUA 13: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 13: —	Action C-LR-LUA 13: —	Action D-LR-LUA 13: —	Action E-LR-LUA 13: Vehicle trips shall be limited to those times that least impact nesting or wintering GRSG.	Action F-LR-LUA 13: —
Action A-LR-LUA 14: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 14: —	Action C-LR-LUA 14: —	Action D-LR-LUA 14: —	Action E-LR-LUA 14: Current transmission and generation siting and construction practices to be reviewed and potentially refined by the Nevada Sagebrush Ecosystem Council and Nevada Sagebrush Ecosystem Technical Team pursuant to the “Resource Selection Function Model” (Coates) and other best available science include proximity to active leks and nesting habitat, relation to migratory and nonmigratory populations, and relation to movement corridors.	Action F-LR-LUA 14: —



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LUA 15: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 15: —	Action C-LR-LUA 15: —	Action D-LR-LUA 15: Eliminate existing raven nesting opportunities created by anthropogenic development on public lands (e.g., remove infrastructure, power line, and communication facilities no longer in service).	Action E-LR-LUA 15: See State raven control actions above.	Action F-LR-LUA 15: —
Action A-LR-LUA 16: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-LUA 16: —	Action C-LR- LUA 16: —	Action D-LR-LUA 16: In PPMAs and PGMA's, require ROW holders to retro-fit existing power lines and other utility structure with perch-detering devices during ROW renewal process.	Action E-LR- LUA 16: TMA-8.4: Apply measures to deter raptor perching and raven nesting on elevated structures.	Action F-LR- LUA 16: —
Action A-LR- LUA 17: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR- LUA 17: —	Action C-LR- LUA 17: —	Action D-LR-LUA 17: —	Action E-LR- LUA 17: Development or infrastructure features should not be placed within a 0.6 mile (1 km) radius around seeps, springs and wet meadows within identified brood rearing habitats wherever possible. These features can provide a competitive advantage for avian predators; therefore increasing GRSG mortality during a period when birds may be susceptible.	Action F-LR- LUA 17: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR- LUA 18: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR- LUA 18: —	Action C-LR- LUA 18: —	Action D-LR-LUA 18: Do not designate new utility corridors in PPMAs and PGMAs.	Action E-LR- LUA 18: <u>TMA-18.6</u> : Site new linear features in existing corridors or, at a minimum, co-locating with existing linear features in SGMAs.	Action F-LR- LUA 18: —
Land Tenure					
Action A-LR-LT 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LT 1: Retain public ownership of PPMAs. Consider exceptions where there is mixed ownership, and land exchanges would allow for additional or more contiguous federal ownership patterns within the PPMA.  Under PPMAs with minority federal ownership, include an additional, effective mitigation agreement for any disposal of federal land. As a final preservation measure consideration should be given to pursuing a permanent conservation easement.	Action C-LR-LT 1: All public lands in ACECs, PPMAs, and identified restoration and rehab land areas will be retained in public ownership.	Action D-LR-LT 1: Retain public ownership of PPMAs and PGMAs. Consider exceptions when disposal and/or acquisitions of public lands would allow for more contiguous federal ownership patterns within the GRSG habitat area, or where a land tenure adjustment would result in a net gain in amount or quality of GRSG habitat.	Action E-LR-LT 1: No similar Action.	Action F-LR-LT 1: Same as Alternative B, without exceptions for disposal to consolidate ownership that would be beneficial to GRSG.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-LT 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-LT 2: Where suitable conservation actions cannot be achieved in PPMAs, seek to acquire state and private lands with intact subsurface mineral estate by donation, purchase or exchange in order to best conserve, enhance or restore GRSg habitat.	Action C-LR-LT 2: BLM and Forest Service will strive to acquire important private lands in BLM-designated ACECs and Forest Service GRSg Special Areas. Acquisition will be prioritized over easements.	Action D-LR-LT 2: Where significant conservation actions could be achieved in PPMAs, seek to acquire lands with intact subsurface mineral estate by donation, purchase, or exchange in order to best conserve, enhance or restore GRSg habitat.	Action E-LR-LT 2: PMA 3.3 and TMA-21.9: To ensure that mitigation efforts to create, restore or enhance habitat are not intentionally disturbed in the future, long-term conservation easements or a record of restrictive covenant should be established over the property. If public lands are used for mitigation purposes, adequate long-term maintenance or replacement of mitigation objectives must be considered while recognizing existing uses (State of Nevada 2012).	Action F-LR-LT 2: —
Withdrawals					
Action A-LR-W 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 1: Propose lands within PPMAs for mineral withdrawal.	Action C-LR-W 1: Same as Alternative A.	Action D-LR-W 1: Same as Alternative A.	Action E-LR-W 1: Through the Nevada Sagebrush Ecosystem Council, encourage the strong conservation ethic in the mining industry by implementing effective avoidance management, and enhancement and reclamation of disturbed lands to preserve, protect, and improve habitat in SGMAs. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved	Action F-LR-W 1: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals (State of Nevada 2012).</p> <p>TMA-15.3: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible (State of Nevada 2012).</p> <p>TMA-15.5: Aggressively engage in reclamation efforts as projects are completed, and target reclamation where the ecological site potential exists in SGMAs. Focus efforts on habitat that has the greatest potential for use by GRSG as guided by ecological site descriptions and other restoration priorities established by the Nevada Sagebrush Ecosystem Council (State of Nevada 2012).</p> <p>TMA-15.9: Differentiate between short-(exploration)</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				and long-term (active mining) impacts and manage timing of operations and physical disturbance accordingly (State of Nevada 2012).	
Action A-LR-W 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 2: In PPMAs, do not recommend withdrawal proposals not associated with mineral activity unless the land management is consistent with GRSG conservation measures. (For example; in a proposed withdrawal for a military training range buffer area, manage the buffer area with GRSG conservation measures.)	Action C-LR-W 2: Same as Alternative A.	Action D-LR-W 2: Same as Alternative A.	Action E-LR-W 2: —	Action F-LR-W 2: Do not approve withdrawal proposals not associated with mineral activity unless the land management is consistent with GRSG conservation measures. (For example; in a proposed withdrawal for a military training range buffer area, manage the buffer area with GRSG conservation measures that have been demonstrated to be effective.
Action A-LR-W 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 3: —	Action C-LR-W 3: ROWS will be amended to require features that enhance GRSG habitat security.  Existing designated corridors in BLM ACECs and Forest Service Special Areas may be accessed for maintenance.	Action D-LR-W 3: —	Action E-LR-W 3: —	Action F-LR-W 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-W 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-W 4: —	Action C-LR-W 4: —	<p>Action D-LR-W 4: In priority and general habitat, no new road ROWs would be authorized except those necessary for public safety or administrative or public need tied to valid existing rights. Limit route construction to realignments of existing ROWs if the realignment:</p> <ol style="list-style-type: none"> <li>1. maintains or enhances priority GRSG habitat,</li> <li>2. eliminates the need to authorize a new ROW to construct a new road, or</li> <li>3. is necessary for public safety,</li> </ol> <p>New ROW authorizations would be evaluated on a case-by-case basis. If new road construction is necessary, minimize impacts on GRSG habitat through application of RDFs and other mitigation measures.</p>	Action E-LR-W 4: <u>TMA-18.6</u> : Site new linear features in existing corridors or, at a minimum, co-locating with existing linear features in SGMAs.	Action F-LR-W 4: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-W 5: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-W 5: —	Action C-LR-W 5: —	Action D-LR-W 5: Within PPMAs and PGMAs, allow industrial coal-fired or natural gas-fired energy facilities associated with existing industrial infrastructure (e.g. a mine site) to provide on-site power generation.	Action E-LR-W 5 <u>TMA-8:</u> Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the State and Nation’s renewable energy demands (State of Nevada 2012).  <u>TMA-8.1:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.	Action F-LR-W 5: —
Action A-LR-W 6: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-W 6: —	Action C-LR-W 6: —	Action D-LR-W 6: Lands that are acquired (exchange, purchase or easement) for GRSG habitat, would be managed as PPMAs.	Action E-LR-W 6: —	Action F-LR-W 6: —
Wind Energy Development					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-WED 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-WED 1: —	Action C-LR-WED 1: —	Action D-LR-WED 1: Designate PPMAs and PGMA as ROW exclusion for utility-scale commercial wind energy facilities (facilities that generate large amounts of electricity that is delivered to many users through transmission and distribution systems).	Action E-LR-WED 1: TMA-18: The Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team will meet energy goals and GRSG conservation measures through close coordination with all interest groups and adherence to NRS 701.610 (amended by the 2011 Nevada Legislature) that requires State agency review of all energy development proposals. Attention will be focused on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the nation's renewable energy demands. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been	Action F-LR-WED 1: Do not site wind energy development in PPMAs and PGMA (Jones 2012).



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				stipulated in the projects' approvals.  TMA-18.1: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.	
Action A-LR-WED 2: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-WED 2: —	Action C-LR-WED 2: —	Action D-LR-WED 2: —	Action E-LR-WED 2: —	Action F-LR-WED 2: Site wind energy development at least five miles from active GRSG leks.
Action A-LR-WED 3: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-LR-WED 3: —	Action C-LR-WED 3: —	Action D-LR-WED 3: Within PPMAs and PGMAs allow industrial wind facilities associated with existing industrial infrastructure (e.g. a mine site) to provide on-site power generation.	Action E-LR-WED 3: TMA-8: Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the renewable energy demands.	Action F-LR-WED 3: —
Industrial Solar					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-IS 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-IS 1: —	Action C-LR-IS 1: Industrial solar projects will be prohibited in ACECs and PPMAs.	Action D-LR-IS 1: Designate PPMAs and PGMAs as ROW exclusion for utility-scale solar energy facilities.	Action E-LR-IS 1: TMA-18: The Nevada Sagebrush Ecosystem Council and the Nevada Sagebrush Ecosystem Technical Team will meet energy goals and GRSG conservation measures through close coordination with all interest groups and adherence to NRS 701.610 (amended by the 2011 Nevada Legislature) that requires State agency review of all energy development proposals. Attention will be focused on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the nation's renewable energy demands. On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been	Action F-LR-IS 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>stipulated in the projects' approvals.</p> <p><u>TMA-18.1:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in nonhabitat wherever possible.</p>	
<p>Action A-LR-IS 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b>.</p>	Action B-LR-IS 2: —	Action C-LR-IS 2: —	<p>Action D-LR-IS 2: Within PPMAs and PGMAs, allow industrial solar energy facilities associated with existing industrial infrastructure (e.g. a mine site) to provide on-site power generation.</p>	<p>Action E-LR-IS 2: <u>TMA-8:</u> Through the Nevada Sagebrush Ecosystem Council, meet both renewable and nonrenewable energy goals and GRSG conservation measures through close coordination with interest groups; focus attention on the series of transmission corridors currently being studied to consider the longer-term transmission needs required to meet the State and Nation's renewable energy demands (State of Nevada 2012).</p> <p><u>TMA-8.1:</u> Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.</p>	Action F-LR-IS 2: —
Urbanization					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LR-U 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-U 1: —	Action C-LR-U 1: —	Action D-LR-U 1: —	Action E-LR-U 1: TMA-20: When a county or city considers a change to its master plan for a land use of higher intensity affecting a SGMA, the county or city should consult with the Nevada Sagebrush Ecosystem Council through its Nevada Sagebrush Ecosystem Technical Team.	Action F-LR-U 1: —
De Minimis Activities					
Action A-LR-DMA 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-DMA 1: —	Action C-LR-DMA 1: —	Action D-LR-DMA 1: —	Action E-LR-DMA 1: TMA-23: Existing land uses and landowner activities in GRSG habitat that do not require state agency review for consistency with the State of Nevada 2012 Plan include the following: (State of Nevada 2012):  4. Existing animal husbandry practices including branding, docking, herding, trailing, etc.  5. Existing farming practices excluding conversion of sagebrush/ grassland to agricultural lands.	Action F-LR-DMA 1: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>6. Existing grazing operations that utilize recognized rangeland management practices included in AMPs, NRCS grazing plans, prescribed grazing plans, etc.</p> <p>7. Construction of agricultural reservoirs and aquatic habitat improvements of less than ten surface acres and drilling of agriculture and residential water wells including installation of tanks, water windmills and solar water pumps more than 0.6 miles from the perimeter of the lek. Within 0.6 miles from leks, no review is required if construction does not occur from March 15 to June 30 and construction does not occur on the lek. All water tanks shall have escape ramps.</p> <p>8. Agricultural and residential</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>electrical distribution lines and substations more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur from March 15 to June 30 and construction does not occur on the lek. Raptor perching deterrents should be installed on all poles within 0.6 miles from leks.</p> <p>9. Agricultural water pipelines if construction activities are more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur March 15 to June 30 and construction is reclaimed.</p> <p>10. New fencing greater than 1.25 miles from leks and maintenance of existing fencing. For new fencing within 1.25 miles of leks, fences with</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				<p>documented high potential for strikes should be marked.</p> <p>11. Irrigation (excluding the conversion of sagebrush-grassland to new irrigated lands).</p> <p>12. Spring development if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation.</p> <p>13. Herbicide use within existing road, pipeline and power line ROW. Herbicides application using spot treatment. Grasshopper/ Mormon cricket control following Reduced Agent-Area Treatments protocol.</p> <p>14. State and county road maintenance.</p> <p>15. Cultural resource pedestrian surveys.</p> <p>16. Emergency response.</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				Note: Regarding #4, #5, and #6 above, The Nevada Sagebrush Ecosystem Technical Team will evaluate these actions and provide recommendation to the Nevada Sagebrush Ecosystem Council pursuant to any new information that is forthcoming from best available science and utilizing the "Resource Selection Function Model" (Coates).	
Action A-LR-DMA 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LR-DMA 2: —	Action C-LR-DMA 2: —	Action D-LR-DMA 2: —	Action E-LR-DMA 2: <u>TMA 23.1</u> : On federal lands, activities that have an approved BLM notice, plan of operation, ROW, or drilling plan, and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals.	Action F-LR-DMA 2: —
Leased Federal Fluid Mineral Estate					



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFME 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 1: In PPMAs, apply actions through LUP implementation decisions (e.g., approval of an Application for Permit to Drill, and Sundry Notice) and upon completion of the environmental record of review (43 CFR 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things:  1. Whether the conservation measure is “reasonable” (43 CFR 3101.1-2) with the valid existing rights; and  2. Whether the action is in conformance with the approved LUP.	Action C-FFME 1: Same as Alternative B.	Action D-FFME 1: —	Action E-FFME 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 1: Apply the following conservation measures as COAs at the project and well permitting stages, and through RMP implementation decisions and upon completion of the environmental record of review (43 CFR Part 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things:  1. Whether the conservation measure is “reasonable” (43 CFR Part 3101.1-2) with the valid existing rights; and  2. Whether the action is in conformance with the approved RMP.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFME 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 2: In PPMAs, provide the following conservation measures as terms and conditions of the approved LUP:  Do not allow new surface occupancy on federal leases within PPMAs, this includes winter concentration areas (Doherty et al. 2008; Carpenter et al. 2010) during any time of the year. Consider an exception: <ul style="list-style-type: none"><li>● If the lease is entirely within PPMAs, apply a 4-mile NSO around the lek, and limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section.</li><li>● If the entire lease is within the 4-mile lek perimeter, limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section. Require</li></ul>	Action C-FFME 2: Same as Alternative B.	Action D-FFME 2: —	Action E-FFME 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 2: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	any development to be placed at the most distal part of the lease from the lek, or, depending on topography and other habitat aspects, in an area that is less demonstrably harmful to GRSG.				
Action A-FFME 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 3: Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and early brood-rearing season in all PPMAs during this period.	Action C-FFME 3: Timing avoidance periods will be required.	Action D-FFME 3: Apply requisite seasonal restriction on exploratory drilling that prohibits surface-disturbing activities in winter habitat and during the lekking, nesting, and early brood-rearing season in all PPMAs. See <b>Appendix G</b> , Leasable Mineral Stipulations, Waivers, Modifications, and Exceptions.	Action E-FFME 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 3: Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and brood-rearing season in all PPMAs and PGMAs during this period. This seasonal restriction shall also to apply to related activities that are disruptive to GRSG, including vehicle traffic and other human presence.
Action A-FFME 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 4: BLM should closely examine the applicability of categorical exclusions in PPMAs. If extraordinary circumstances review is applicable, BLM should determine whether those circumstances exist.	Action C-FFME 4: Same as Alternative B.	Action D-FFME 4: —	Action E-FFME 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 4: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFME 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 5: Complete Master Development Plans in lieu of APD-by-APD processing for all but wildcat wells.	Action C-FFME 5: Same as Alternative B.	Action D-FFME 5: —	Action E-FFME 5: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 5: Same as Alternative B.
Action A-FFME 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Action B-FFME 6: When permitting APDs on existing leases that are not yet developed, the proposed surface disturbance cannot exceed 3% for that area. Consider an exception if:</p> <ul style="list-style-type: none"> <li>• Additional, effective mitigation is demonstrated to offset the resulting loss of GRSG (see Objectives).</li> <li>• When necessary, conduct additional, effective mitigation in 1) PPMAs or – less preferably – 2) PGMAs (dependent upon the area-specific ability to increase GRSG populations).</li> <li>• Conduct additional,</li> </ul>	Action C-FFME 6: Same as Alternative B.	<p>Action D-FFME 6: On leased federal fluid mineral estate, when permitting Master Development Plans in PPMAs on leases not yet developed, the proposed surface disturbance must achieve no net unmitigated loss of PPMAs. Apply requisite seasonal restrictions on exploratory drilling that prohibits surface-disturbing activities in winter habitat and during the lekking, nesting, and early brood-rearing season in all PPMAs.</p> <p>When necessary, prioritize and conduct additional mitigation:</p> <ul style="list-style-type: none"> <li>• Within the same population area where the impact is realized; or</li> <li>• Within the same WAFWA Management Zone as the impact</li> </ul>	Action E-FFME 6: See Role of Sagebrush Ecosystem Technical Team.	<p>Action F-FFME 6: When permitting APDs on existing leases that are not yet developed, the proposed surface disturbance cannot exceed 3% <u>per section</u> for that area.</p> <p>Consider an exception if:</p> <ul style="list-style-type: none"> <li>• Additional, effective mitigation is demonstrated to offset the resulting loss of GRSG (see Objectives).</li> <li>• When necessary, conduct additional, effective mitigation in PPMAs and PGMAs (dependent upon the area-specific ability to increase GRSG populations).</li> <li>• Conduct additional, effective mitigation first within the same population area where the impact is realized, and if not possible then conduct mitigation within the same Management Zone</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	effective mitigation first within the same population area where the impact is realized, and if not possible then conduct mitigation within the same Management Zone as the impact, per 2006 WAFWA Strategy – pg. 2-17.		unless greater population benefits can be realized outside the population area or WAFWA management zone, subject to BLM and State Wildlife agency consultation and agreement.		as the impact, per 2006 WAFWA Strategy – pg. 2-17.
Action A-FFME 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 7: Require unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring) to minimize adverse impacts on GRSG according to the Federal Lease Form, 3100-11, Sections 4 and 6.	Action C-FFME 7: Same as Alternative B.	Action D-FFME 7: —	Action E-FFME 7: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 7: Same as Alternative B.
Action A-FFME 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 8: Identify areas where acquisitions (including subsurface mineral rights) or conservation easements, would benefit GRSG habitat.	Action C-FFME 8: Same as Alternative B.	Action D-FFME 8: —	Action E-FFME 8: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 8: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action B-FFME 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 9: For future actions, require a full reclamation bond specific to the site in accordance with 43 CFR 3104.2, 3104.3, and 3104.5. Insure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000a, Hagen et al. 2007) that would result in full restoration of the lands to the condition it was found prior to disturbance. Base the reclamation costs on the assumption that contractors for the BLM or Forest Service will perform the work.	Action C-FFME 9: Same as Alternative B.	Action D-FFME 9: —	Action E-FFME 9: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 9: Same as Alternative B.
Action A-FFME 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 10: Make applicable BMPs (see Appendix D of the NTT Report) mandatory as COAs within priority GRSG habitat.	Action C-FFME 10: Same as Alternative B.	Action D-FFME 10: On leased federal fluid mineral estate (where no APD has been issued), RDFs would be attached as lease notices.	Action E-FFME 10: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 10: Same as Alternative B.
Action A-FFME 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 11: —	Action C-FFME 11: Agencies will explore options to amend, cancel, or buy out leases in ACECs and PPMAs.	Action D-FFME 11: —	Action E-FFME 11: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 11: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FFME 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 12: —	Action C-FFME 12: Include conditions that require relinquishment of leases/authorizations if doing so will: 1) mitigate the impact of a proposed development, or 2) mitigate the unanticipated impacts of an approved development.	Action D-FFME 12: —	Action E-FFME 12: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 12: —
Action A-FFME 13: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 13: —	Action C-FFME 13: No waivers will be issued.	Action D-FFME 13: —	Action E-FFME 13: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 13: —
Action A-FFME 14: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 14: —	Action C-FFME 14: —	Action D-FFME 14: On leased federal fluid mineral estate within PPMAs complete Master Development Plans in lieu of APD-by-APD processing for all but wildcat wells.	Action E-FFME 14: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 14: —
Action A-FFME 15: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FFME 15: —	Action C-FFME 15: —	Action D-FFME 15: On leased federal fluid mineral estate within PPMAs, require a full reclamation bond specific to the site. Insure bonds are sufficient for costs relative to reclamation that would result in full restoration. Base the reclamation costs on the assumption that contractors for the BLM will perform the work.	Action E-FFME 15: See Role of Sagebrush Ecosystem Technical Team.	Action F-FFME 15: —
Fluid Minerals					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FM 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FM 1: Close PPMAs to fluid mineral leasing. Consider an exception when there is an opportunity for the BLM and Forest Service to influence conservation measures where surface and/or mineral ownership is not entirely federally owned (i.e., checkerboard ownership). In this case, a plan amendment may be developed that opens the priority area for new leasing. The plan must demonstrate long-term population increases in the priority area through mitigation (prior to issuing the lease) including lease stipulations, off-site mitigation, etc., and avoid short-term losses that put the GRSG population at risk from stochastic events leading to extirpation.	Action C-FM 1: Same as Alternative B.	Action D-FM 1: In un-leased federal fluid mineral estate in PPMAs apply a NSO stipulation and do not allow for waivers, exceptions, or modifications to that stipulation. Upon expiration or termination of existing leases within PPMAs, apply the same stipulation as above.	Action E-FM 1 B-FM 1: Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat. This is similar to designation as ROW avoidance areas.	Action F-FM 1: Close PPMAs and PGMAs to fluid mineral leasing. Consider an exception:  When there is an opportunity for the BLM to influence conservation measures where surface and/or mineral ownership is not entirely federally owned (i.e., checkerboard ownership). In this case, a plan amendment may be developed that opens GRSG habitat for new leasing. The plan must demonstrate long-term population increases in the priority area through mitigation (prior to issuing the lease) including lease stipulations, <u>and</u> off-site mitigation, etc., and avoid short-term losses that put the GRSG population at risk from stochastic events leading to extirpation.



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FM 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FM 2: —	Action C-FM 2: —	Action D-FM 2: In un-leased federal fluid mineral estate in PGMAs, apply a NSO stipulation, but allow for waivers, exception, or modifications consistent with the objective. Upon expiration or termination of existing leases within PGMAs, apply the same stipulation as above.	Action E-FM 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-FM 2: —
Action A-FM 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Action B-FM 3: Allow geophysical exploration within PPMAs to obtain exploratory information for areas outside of and adjacent to PPMAs.</p> <p>Only allow geophysical operations by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply.</p>	Action C-FM 3: Same as Alternative B.	<p>Action D-FM 3: Allow geophysical exploration within PPMAs and PGMAs that does not result in crushing of sagebrush vegetation or create new or additional surface disturbance. Heli-portable drilling methods, articulated rubber-tired vehicles that “leave no trace,” and vibro-seis geophysical operations conducted on existing roads and bladed shoulders would be allowed. Geophysical operations would be subject to TLs and CSU stipulations established for GRSG in PPMAs and PGMAs.</p> <p>Allow no use of surface shot methods within PPMAs.</p>	Action E-FM 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-FM 3: Allow geophysical exploration within PPMAs and PGMAs to obtain exploratory information for areas outside of and adjacent to PPMAs. Only allow geophysical operations by helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood rearing and winter habitats during their season of use by GRSG.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-FM 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-FM 4: —	Action C-FM 4: —	Action D-FM 4: In un-leased federal fluid mineral estate in PGMAs, apply a NSO stipulation, but allow for waivers, exception, or modifications consistent with the objective. Upon expiration or termination of existing leases within PGMAs, apply the same stipulation as above.	Action E-FM 4: See Role of Sagebrush Ecosystem Technical Team.	Action F-FM 4: —
<b>Locatable Minerals</b>					
Action A-LOC 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	<p>Action B-LOC 1: In PPMAs, propose withdrawal from mineral entry based on risk to the GRSG and its habitat from conflicting locatable mineral potential and development.</p> <ul style="list-style-type: none"> <li>• Make any existing claims within the withdrawal area subject to validity exams or buy out. Include claims that have been subsequently determined to be null and void in the proposed withdrawal.</li> <li>• In plans of operations required prior to any proposed</li> </ul>	Action C-LOC 1: Same as Alternative B.	<p>Action D-LOC 1: BLM Public Lands- Authorize locatable mineral development activity per the 43 CFR 3809 regulations through Plan of Operation Approvals and apply mitigation and GRSG BMPs that minimizes the loss of PPMAs or provides for enhancement of PPMAs through off-site mitigation within the WAFWA management zone.</p> <p>Forest Service: Require that new plans of operation on forest service-administered lands authorized under 36 CFR 228 Subpart A – Locatable Minerals, include measures to avoid or minimize adverse effects on</p>	<p>Action E-LOC 1: <u>TMA-15.3</u>: Follow a strategy that seeks to avoid conflict with GRSG by locating facilities and activities in Non Habitat wherever possible.</p> <p>Proposed facilities and activities over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat.</p> <p><u>TMA-15.5</u>: Aggressively engage in reclamation efforts as projects are completed, and target reclamation where the ecological site potential exists in SGMAs. Focus efforts on habitat that has</p>	Action F-LOC 1: Same as Alternative B.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
	<p>surface disturbing activities, include the following:</p> <ul style="list-style-type: none"> <li>• Additional, effective mitigation in perpetuity for conservation (In accordance with existing policy, WO IM 2008-204). Example: purchase private land and mineral rights or severed subsurface mineral rights within the priority area and deed to US Government).</li> <li>• Consider seasonal restrictions if deemed effective.</li> </ul>		GRSG populations or their habitat.	<p>the greatest potential for use by GRSG as guided by ecological site descriptions and other restoration priorities established by the Nevada Sagebrush Ecosystem Council.</p> <p><u>TMA-15.6:</u> Recognize that stipulations for other species (e.g. raptors) may impede the ability to effectively reclaim areas of impact and remove those barriers in order to achieve immediate and effective reclamation.</p> <p><u>TMA-15.7:</u> Prioritize areas for habitat improvement utilizing sound resource information including soil surveys, ecological site descriptions, and GRSG population data.</p> <p><u>TMA-15.8:</u> Design exploration projects for mineral access and the betterment of habitat. Ensure roads and other ancillary features that impact GRSG habitat are designed to avoid where feasible and otherwise minimize and mitigate impacts in the short and long term.</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				TMA-15.9: Differentiate between short-(exploration) and long-term (active mining) impacts and manage timing of operations and physical disturbance accordingly	
Action A-LOC 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 2: Make applicable BMPs (Appendix E of the NTT) mandatory as COAs within PPMAs.	Action C-LOC 2: Same as Alternative B.	Action D-LOC 2: —	Action E-LOC 2: TMA-15.1: Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMAs (State of Nevada 2012).	Action F-LOC 2: Same as Alternative B.
Action A-LOC 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 3: —	Action C-LOC 3: —	Action D-LOC 3: —	Action E-LOC 3: Through the Nevada Sagebrush Ecosystem Council, encourage the strong conservation ethic in the mining industry by implementing effective avoidance management, and enhancement and reclamation of disturbed lands to preserve, protect, and improve habitat in SGMAs. On federal lands, activities that have an approved BLM or Forest Service notice of intent, plan of operation, ROW, or drilling plan,	Action F-LOC 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				and on State/Private lands, projects with an approved Nevada Division of Environmental Protection permit, are exempt from any new mitigation requirements above and beyond what has already been stipulated in the projects' approvals.	
Action A-LOC 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 4: —	Action C-LOC 4: —	Action D-LOC 4: —	Action E-LOC 4: Implement a centralized impact assessment process overseen by the Nevada Sagebrush Ecosystem Council that provides consistent evaluation, reconciliation, and guidance for project development that avoids or minimizes conflicts with GRSG in SGMAs.	Action F-LOC 4: —
Action A-LOC 5: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 5: —	Action C-LOC 5: —	Action D-LOC 5: —	Action E-LOC 5: Consistent with BLM 43 CFR 3809 regulations for Notice-level operations, and Forest Service 36 CFR 228A regulations, governing mining and exploration, allow exploration and other mineral-related activities that create not more than five acres of surface disturbance. The BLM and Forest Service may exercise existing discretionary	Action F-LOC 5: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				authority to consider other information, including cumulative impacts.	
Action A-LOC 6: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 6: —	Action C-LOC 6: —	Action D-LOC 6: —	Action E-LOC 6: Recognize existing State and Federal regulatory mechanisms that govern mining and exploration activities, including BLM 43 CFR 3809 surface management regulations for hard rock mining, Forest Service 36 CFR 228A regulations governing mining and exploration, and NAC 519A regulations for reclamation of mining and exploration projects, that are adequate to conserve GRSG and sagebrush habitats in the interim until future Suitable conservation plans are approved by the Nevada Sagebrush Ecosystem Council.	Action F-LOC 6: —
Action B-LOC 7: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 7: —	Action B-LOC 7: —	Action B-LOC 7: —	Action B-LOC 7: Aggressively engage in reclamation efforts as projects are completed, and target reclamation where the ecological site potential exists in SGMAs. Focus efforts on habitat that has the greatest potential for use by GRSG as guided by ecological site descriptions and other	Action B-LOC 7: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
				restoration priorities established by the Nevada Sagebrush Ecosystem Council.	
Action B-LOC 8: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 8: —	Action B-LOC 8: —	Action B-LOC 8: —	Action B-LOC 8: Recognize that stipulations for other species (e.g. raptors) may impede the ability to effectively reclaim areas of impact and remove those barriers in order to achieve immediate and effective reclamation.	Action B-LOC 8: —
Action B-LOC 9: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 9: —	Action B-LOC 9: —	Action B-LOC 9: —	Action B-LOC 9: Prioritize areas for habitat improvement utilizing sound resource information including soil surveys, ecological site descriptions, and GRSG population data.	Action B-LOC 9: —
Action B-LOC 10: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 10: —	Action B-LOC 10: —	Action B-LOC 10: —	Action B-LOC 10: Design exploration projects for mineral access and the betterment of habitat. Ensure roads and other ancillary features that impact GRSG habitat are designed to avoid where feasible and otherwise minimize and mitigate impacts in the short and long term	Action B-LOC 10: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-LOC 11: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 11: —	Action C-LOC 11: —	Action D-LOC 11: —	Action E-LOC 11: Differentiate between short-(exploration) and long-term (active mining) impacts and manage timing of operations and physical disturbance accordingly.	Action F-LOC 11: —
Action A-LOC 12: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-LOC 12: —	Action C-LOC 12: —	Action D-LOC 12: Close or mitigate abandon mines sites within PPMAs and PGMAs to reduce predation of GRSG by eliminating physical structures that could provide nesting opportunities and perching sites for predators.	Action E-LOC 12: —	Action F-LOC 12: —
<b>Salable Minerals</b>					
Action A-SAL 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SAL 1: Close PPMAs to mineral material sales.	Action C-SAL 1: Same as Alternative B.	Action D-SAL 1: Allow no new salable mineral material sites in PPMAs and PGMAs.	Action E-SAL 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-SAL 1: Same as Alternative B.
Action A-SAL 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SAL 2: In PPMAs, restore salable mineral pits no longer in use to meet GRSG habitat conservation objectives.	Action C-SAL 2: Same as Alternative B.	Action D-SAL 2: In PPMAs, reclaim salable mineral materials sites no longer in use to meet GRSG habitat objectives (see Table 2-6).	Action E-SAL 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-SAL 2: Same as Alternative B.



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SAL 3: No common action across LUPs within the sub-region. See <b>Section 2.1.</b>	Action B-SAL 3: —	Action C-SAL 3: —	<p>Action D-SAL 3: On existing mineral materials sites, allow mineral materials sales in PPMAs and PGMAAs as required, to meet Federal, Tribal, State, County and public needs. Loss of habitat through disturbance in PPMAs and PGMAAs would be off-set through mitigation.</p> <p>Additional mitigation, including off-site mitigation would be required to off-set any net loss of habitat as a result of authorizing expansion of existing materials pits. Habitat loss in PPMAs and PGMAAs would be off-set through mitigation to ensure no net un-mitigated loss.</p> <p>All mineral materials activities would be subject to compliance with standard surface use stipulations (general occupancy, seasonal and yearlong TLs, and CSU stipulations) for GRSg in PPMAs and PGMAAs.</p>	Action E-SAL 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-SAL 3: —

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-SAL 4: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SAL 4: —	Action C-SAL 4: —	Action D-SAL 4: Close or mitigate abandon mines sites within PPMAs and PGMAs to reduce predation of GRSG by eliminating physical structures that could provide nesting opportunities and perching sites for predators.	Action E-SAL 4: —	Action F-SAL 4: —
<b>Nonenergy Leasable Minerals</b>					
Action A-NEL 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-NEL 1: Close PPMAs to non-energy leasable mineral leasing. This includes not permitting any new leases to expand an existing mine.	Action C-NEL 1: Same as Alternative B.	Action D-NEL 1: Close PPMAs and PGMAs to non-energy leasable mineral leasing.	Action E-NEL 1: Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat. This is similar to designation as avoidance areas.	Action F-NEL 1: Same as Alternative B.
Action A-NEL 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-NEL 2: —	Action C-NEL 2: —	Action D-NEL 2: Issue no non-energy leasable prospecting permits within PPMAs and PGMAs.	Action E-NEL 2: See Role of Sagebrush Ecosystem Technical Team.	Action F-NEL 2: —
Action A-NEL 3: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-NEL 3: For existing non-energy leasable mineral leases in PPMAs, in addition to the solid minerals BMPs (Appendix E of NTT), follow the same BMPs applied to Fluid Minerals (Appendix D of NTT), when wells are used for solution mining.	Action C-NEL 3: Same as Alternative B.	Action D-NEL 3: —	Action E-NEL 3: See Role of Sagebrush Ecosystem Technical Team.	Action F-NEL 3: Same as Alternative B.
<b>Mineral Split Estate</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
Action A-MSE 1: Action A-MSE 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-MSE 1: Where the federal government owns the mineral estate in PPMAs, and the surface is in nonfederal ownership, apply the conservation measures applied on public lands.	Action C-MSE 1: Same as Alternative B.	Action D-MSE 1: Where the federal government owns the mineral estate in PPMAs and PGMAs and the surface is in nonfederal ownership and adjacent to public lands, apply the appropriate conservation measures and RDFs that are applied on public lands.	Action E-MSE 1: See Role of Sagebrush Ecosystem Technical Team.	Action F-MSE 1: Same as Alternative B.
Action A-MSE 2: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-MSE 2: Where the federal government owns the surface, and the mineral estate is in nonfederal ownership in PPMAs, apply appropriate Fluid Mineral BMPs (see Appendix D of NTT) to surface development.	Action C-MSE 2: Same as Alternative B.	Action D-MSE 2: Where the federal government owns the surface and the mineral estate is in nonfederal ownership in PPMAs and PGMAs, apply appropriate surface use stipulations and RDFs to surface development.	Action E-MSE 2: Proposed features over 32 acres per square mile would require application of the avoid, minimize, and mitigation evaluation in Occupied and Suitable Habitat.	Action F-MSE 2: Same as Alternative B.
<b>Special Designations-Areas of Critical Environmental Concern (ACECs)</b>					
Action A-SD 1: No common action across LUPs within the sub-region. See <b>Section 2.1</b> .	Action B-SD 1: —	Action C-SD 1: Designate the following proposed ACECs to preserve, protect, conserve, restore, and sustain GRSG populations and the sagebrush ecosystem on which the GRSG relies. <ul style="list-style-type: none"> <li>• Black Rock (132,400 acres)</li> <li>• Buffalo Skedaddle (1,033,000 acres)</li> </ul>	Action D-SD 1: Same as Alternative A.	Action E-SD 1: —	Action F-SD 1: Designate the following proposed ACECs (BLM) and Special Conservation Areas (Forest Service) as sagebrush reserves to conserve GRSG- and other sagebrush-dependent species. <ul style="list-style-type: none"> <li>• Bates Mountain (384,2200 acres)</li> <li>• Cortez Range (164,800 acres)</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"> <li>• Butte/Buck/White Pine (1,031,000 acres)</li> <li>• Clan Alpine (70,900 acres)</li> <li>• Cortez (127,300 acres)</li> <li>• Desatoya (170,800 acres)</li> <li>• Desert (557,100 acres)</li> <li>• East Valley (160,300 acres)</li> <li>• Fish Creek (50,600 acres)</li> <li>• Gollaher (597,700 acres)</li> <li>• Islands (112,600 acres)</li> <li>• Lincoln (280,200 acres)</li> <li>• Lone Willow (298,300 acres)</li> <li>• Massacre (987,700 acres)</li> <li>• Monitor 582,300 acres)</li> <li>• North Fork (827,900 acres)</li> </ul>			<ul style="list-style-type: none"> <li>• Fish Creek Mountains (70,100 acres)</li> <li>• Little Fish Lake Valley (122,700 acres)</li> <li>• Monitor (564,700 acres)</li> <li>• Monitor Valley (253,300 acres)</li> <li>• Reese River (109,600 acres)</li> <li>• Roberts Mountain (100,900 acres)</li> <li>• Telegraph Mountain (14,100 acres)</li> </ul> <p>Special Management: To protect the relevance and importance values of the GRSG and habitat, the following management prescriptions would apply:</p> <ul style="list-style-type: none"> <li>• Closed to cross country vehicle travel</li> <li>• Motorized and mechanized travel limited to designated routes. No new mechanized or motorized routes within 4 miles of leks or within PPMAs</li> <li>• Seasonally prohibit camping and</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"> <li>• O'Neil Basin (665,600 acres)</li> <li>• Pine Forest (46,800 acres)</li> <li>• Reese River 351,425 acres)</li> <li>• Ruby Valley (292,000 acres)</li> <li>• Santa Rosa (601,600 acres)</li> <li>• Schell Antelope (296,000 acres)</li> <li>• Shoshone (239,100 acres)</li> <li>• Snake (319,700 acres)</li> <li>• South Fork (223,500 acres)</li> <li>• Springs/Snake Valley (130,500 acres)</li> <li>• Steptoe Cave (184,500 acres)</li> <li>• Three Bar (417,500 acres)</li> <li>• Toiyabe (640,900 acres)</li> <li>• Tuscarora (442,000 acres)</li> </ul>			<p>nonmotorized recreation within 4 miles of active leks</p> <ul style="list-style-type: none"> <li>• Allow only SRPs that have demonstrated beneficial or neutral effects on PPMAs</li> <li>• Exclusion area for new ROWs in PPMAs</li> <li>• Avoidance area for new ROWs in PPMAs and PGMAs</li> <li>• Retain PPMAs in the ACECs in federal ownership</li> <li>• Prioritize acquisition of private lands in ACECs over easements</li> <li>• Mineral withdrawal for PPMAs in ACECs</li> <li>• Allow for vegetative management to be consistent with composition and structure in achieving habitat objectives</li> <li>• Allow for seasonal and timing restrictions in livestock grazing in the ACECs</li> <li>• When possible permanently retire</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"> <li>• Virginia (53,500 acres)</li> <li>• Vya (324,500 acres)</li> </ul> <p>Special Management: To protect the relevance and importance values of the GRSG and habitat, the following management prescriptions would apply:</p> <ul style="list-style-type: none"> <li>• Designate as VRM Class 1</li> <li>• No livestock grazing during lek and nesting periods</li> <li>• No livestock grazing during winter periods</li> <li>• Motorized travel would be limited to existing roads, primitive roads, and trails</li> <li>• Prohibit industrial wind and wind farm construction in ACEC or within 5-10 miles of ACEC boundary</li> <li>• Prohibit industrial solar projects within ACECs</li> <li>• Mineral withdrawal from PPMAs and</li> </ul>			<p>grazing permits as opportunity arises</p> <ul style="list-style-type: none"> <li>• Manage riparian and wetland areas to meet proper functioning condition and maintain a component of perennial forbs with diverse species richness and productivity relative to site potential</li> <li>• Prohibit new water developments for diversion from springs or seeps within PPMAs and PGMAs</li> <li>• Closed to oil, gas and geothermal leasing in PPMAs and within 4 miles of active leks</li> <li>• Allow geophysical exploration outside of PPMAs using helicopter-portable drilling methods only and in accordance with seasonal timing restrictions or other restrictions that may apply</li> <li>• Do not use Categorical Exclusion to resolve Section 390 resource conflicts in PPMAs</li> <li>• Design and implement fuels treatments with</li> </ul>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<p>targeted restoration habitat</p> <ul style="list-style-type: none"><li>● Require existing and future energy transmission lines in existing ROW corridors to acquire features to enhance GRSG habitat security</li><li>● Avoidance area for new ROWs and communication or other towers</li><li>● Protect Native American traditional and cultural sites and uses</li><li>● Retain all public lands in the ACECs in federal ownership</li><li>● Prioritize acquisition of private lands in ACECs over easements</li><li>● Minimal use of herbicides to control invasive and noxious weeds</li><li>● Closed for oil, gas and geothermal leasing within ACECs</li><li>● Mineral withdrawal for ACECs and PPMAs</li></ul>			<p>emphasis on protecting existing sagebrush ecosystem</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E*	Alternative F
		<ul style="list-style-type: none"><li>● Allow locatable and nonlocatable mineral development in nonhabitat areas</li><li>● Prohibit the use of helicopters in managing wild horse populations</li></ul>			
<p>*Alternative E was submitted by the State of Nevada’s Governor’s office and only covers land within the decision area in the State of Nevada. The State of California lands will follow Alternative A.</p> <p><sup>1</sup>The use of — indicates that there is no similar action, or that the similar action is reflected in another management action in the alternative.</p> <p><sup>2</sup>BMPs as currently referred to would become RDFs.</p>					



**Table 2-6**, Proposed Habitat Objectives for Greater Sage-Grouse, and **Table 2-7**, Guidelines for Establishing Allowable Use Levels if Not Meeting (or Not Making Progress Toward) Greater GRSB Objectives, outline GRSB habitat objectives and utilization guidelines proposed under Alternative D (BLM/Forest Service Proposed Alternative).

**Table 2.6. Proposed Habitat Objectives for Greater Sage-Grouse**

Life Requisite	Habitat Indicator	Objective
<b>GENERAL</b>		
All life stages	Rangeland Health Standards	Meeting all standards <sup>1</sup>
<b>LEK</b>		
Cover	Availability of sagebrush cover	Has adjacent sagebrush cover
Security	Proximity of tall trees	Within 3 kilometers (1.86 miles):  none within line of sight of the lek  <3.5% conifer cover land cover
	Proximity of tall structures	None within 3 miles (5 km)
<b>NESTING</b>		
Cover	Sagebrush canopy cover (%)	>20
	Sagebrush species present	Includes <i>Artemisia tridentata</i> subspecies
	Perennial grass cover (%)	>10 if shrub cover <25 <sup>2</sup>
	Annual grass (%)	<5
	Total shrub cover (%)	>40
	Conifer encroachment (%)	<5
<b>BROOD-REARING/SUMMER</b>		
Cover	Sagebrush canopy cover (%)	>10
Cover and Food	Perennial forb canopy cover (%)	≥5 arid
		>15 mesic
Food	Riparian Areas/Meadows	Manage for PFC
	Perennial forb availability (riparian areas/meadows)	≥ 5 plant species present <sup>3</sup>
Security	Conifer encroachment (%)	<3 phase I (0 – 25% cover)  No phase II (25 – 50% cover)  No phase III (>50% cover)  within 850 m buffer of microhabitat plot
	Riparian Area/Meadow Interspersion with adjacent sagebrush	Perimeter to area ratio of 0.15 within 159 meter buffer of the microhabitat plot
<b>WINTER</b>		

Life Requisite	Habitat Indicator	Objective
Cover and Food	Sagebrush canopy cover (%)	>10
	Sagebrush height in centimeters(cm)	>25
	Conifer encroachment (%)	<5 phase I (0 – 25% cover) no phase II (25 – 50% cover) no phase III (>50% cover) within 850 m buffer of microhabitat plot
	Sagebrush extent (%)	>85 sagebrush land cover within 850 m buffer centered on microhabitat plot
	Sagebrush species comp (%)	>50 <i>A. t. tridentate</i> sites >25 <i>A. arbuscula</i> sites >25 <i>A. t. vaseyana</i> sites
<p><sup>1</sup>Upland standards are based on indicators for canopy and ground cover, including litter, live vegetation, and rock, appropriate to the ecological potential of the site.</p> <p><sup>2</sup>Assumes upland rangeland health standards are being met.</p> <p><sup>3</sup>Standard considered In addition to PFC. Measured ESD/Daubenmire (25cm x 50cm frame). Includes all mesic plant species, not only perennial forbs.</p> <p>Sources: Blomberg et al. 2012; Casazza 2011; Coates et al. 2011; Coates and Delehanty 2010; Coates and Casazza (in prep. A); Coates and Casazza (in prep. B); Connelly et al. 2000; Kolada 2009a, 2009b; Lockyer et al. (in review); Nevada Governor's Sage-Grouse Conservation Team 2010</p>		

**Table 2.7. Guidelines for Establishing Allowable Use Levels if Not Meeting (or Not Making Progress Toward) GRSG Objectives**

Community Type-Key Species	Percent Utilization of Key Species	Notes	Terms and Conditions
Mountain Big sage	<45% herbaceous species; <35% shrub species	Holechek 1998 Mixed in with a lot of other species	Livestock removed in 3 to 5 days of reaching utilization level
Wyoming and Basin Big sage	<35% herbaceous species; <35% shrub species		Livestock removed in 3 to 5 days of reaching utilization level
Black sage	<35% herbaceous species; <35% shrub species	Winter sheep forage	Livestock removed in 3 to 5 days of reaching utilization level
Riparian and wet meadows	As Applicable: <50% herbaceous species; <35% woody species or Average stubble height of at least 4 to 6 inches (depending on site capability and potential) for herbaceous riparian vegetation.	Monitoring would be conducted using accepted protocols (including but not limited to: Burton et al. 2011; BLM 1996; Platts 1990).	Average stubble height 4 to 6 inches – Livestock removed in 3 to 5 days of reaching utilization level based on site. Or (sequential action) No grazing from May 15 to August 30 in brood rearing habitat.
Sources: Holechek 1988; Holechek et al. 1998; Burton et al. 2011; BLM 1996; Platts 1990			

## 2.9. Summary of Environmental Consequences

Management actions across the range of alternatives would result in more, less, or equivalent impacts on GRSG habitat and applicable resource program areas. **Table 2-8**, Summary of Environmental Consequences, summarizes and compares the impacts of management actions across alternatives.

**Table 2.8. Summary of Environmental Consequences**

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<b>Greater Sage-Grouse</b>					
Continued implementation of BLM vegetation and soil management policies and standards in sagebrush habitat would decrease invasive species, help re-establish native plants, reduce the risk of wildfire, and reduce juniper and pinyon pine, conifers, and annual grasses, leading to a long-term improvement in value and quantity of GRSG habitat.	Alternative B management prescriptions for vegetation and soil applied to PPMAs (12,693,500 acres) and PGMAs (5,039,400 acres) would provide greater protection and restoration efforts for GRSG habitat compared with Alternative A.	Management under Alternative C would not prioritize restoration treatments within occupied habitats; therefore, it would decrease the potential for restoring GRSG habitat, compared with Alternative A.	Management under Alternative D would focus on vegetation management within PPMAs and PGMAs with a goal of maintaining a resilient sagebrush vegetative community, restoring sagebrush communities to reduce habitat fragmentation, and maintaining and re-establishing habitat connectivity over the long term. Habitat trends for 10 and 50 years would improve, compared with Alternative A, and would be similar to Alternative B.	In comparison with Alternative A, Alternative E would provide greater benefits to GRSG and their habitats by establishing regulatory mechanisms which would provide protections for GRSG on lek or nesting habitat. Riparian impacts would be expected to be reduced from Alternative A. Management under Alternative E would provide for more vegetation treatments within occupied GRSG habitat than under Alternative A, similar to Alternatives B and D. Ten and fifty year habitat trends would improve compared to Alternative A and would be similar to Alternatives B and D.	Vegetation management under Alternative F would provide about the same level of protection to GRSG as Alternative B, or slightly less.
Continuation of national and local livestock management plans and policies would not specifically protect GRSG habitat, though they could provide indirect benefits through preservation of existing sagebrush habitat. Management of riparian areas to achieve Proper Functioning Condition would improve GRSG brood-rearing habitats. Range	Under Alternative B, the same number of acres would be open to livestock grazing as under Alternative A. In comparison with Alternative A, Alternative B management actions would further reduce, but would not eliminate, impacts from livestock grazing on GRSG and their habitat.	Livestock use would be closed on about 17,589,700 acres of PPMA. Under Alternative C, impacts on GRSG would be reduced compared with Alternative A in upland sites but increased in riparian sites. Removal of fencing would reduce the potential of GRSG direct strikes but would increase negative impacts on brood rearing habitats from wild horses and burros having access to more riparian sites.	Compared with Alternative A, Alternative D livestock management actions would further reduce, but would not eliminate, impacts from grazing on GRSG and their habitat.	Livestock grazing management under Alternative E would emphasize cooperative implementation of appropriate prescribed grazing conservation actions, at scales sufficient to influence a positive response in GRSG habitat. Riparian areas would be managed, at a minimum,	In comparison with Alternative A, livestock management under Alternative F would provide more indirect benefits to GRSG due to increases in nesting and brood rearing habitat amount and quality. Alternative F may increase some direct impacts on nesting GRSG when compared with Alternative A by not applying timing restrictions to livestock during GRSG nesting periods. This is likely offset by closure of 25 percent of each planning area to livestock grazing each year and removal of certain livestock related structures such as fences.
	Under Alternative B, impacts on GRSG from fire suppression activities would be largely the same as Alternative A. Relative to the amount of GRSG habitat that is expected to burn based on current trends and is outside the	Impacts on GRSG from wildfire suppression and fuels management would be the same as Alternative B.	Impacts from wildfire and fuels management are expected to be similar to but slightly less than Alternative B due to the fact that fuels management treatments and post-fire rehabilitation projects in PPMAs are focused on maximizing benefits to GRSG.		Effects on GRSG from wildfire and fuels management would be the same as Alternative B.
		Under Alternative C, wild horses and burros would be managed on the same HMA/WHBT acreage as under Alternative A.			

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>improvements would be designed to meet range and wildlife objectives, which could protect GRSG habitat.</p> <p>Most LUPs do not include provisions for managing fires and fuels to protect GRSG habitat. Under Alternative A, wildfires would likely continue to increase in size and frequency in seven of the nine populations/subpopulations in the sub-region. GRSG would subsequently continue to be degraded or lost. Small and heavily disturbed populations with dominance of invasive annual grass understory would be particularly susceptible to these impacts.</p> <p>Wild horses and burros would continue to be managed on HMAs/WHBTs, but management would not be based specifically on the habitat needs of GRSG. Keeping horses and burros</p>	<p>control of the BLM or Forest Service, Alternative B may provide localized but minimal protections and improvements to GRSG habitat.</p> <p>Alternative B provides significant short-term and localized improvements to grass cover and forb availability from changes in wild horse and burro management, compared with Alternative A.</p> <p>Fluid minerals management under Alternative B would close 12,693,500 acres of PPMA's to leasing. Within modeled nesting habitat, there would be 10,522,300 acres of PPMA's. Withdrawal from mineral leasing would result in long-term beneficial impacts on GRSG habitats associated with all seasonal life history requirements.</p> <p>Under Alternative B, management of locatable minerals would be more protective of GRSG habitat than under Alternative A.</p>	<p>However horses and burros would be expected to range over a larger area than under Alternative A, and would cause greater adverse impacts on quality GRSG habitat.</p> <p>Under Alternative C, fluid mineral leasing would be precluded for all ACECs, including all PPMA. Closed acreage would protect all occupied or potentially occupied GRSG habitat.</p> <p>Mineral entry withdrawal would be proposed for PPMA and all ACECs, protecting all occupied or potentially occupied GRSG habitat and providing an increased level of protection to all associated populations and sub-populations.</p> <p>Management under Alternative C would close PPMA (17,732,900 acres) to mineral material sales. Closure would increase protection of all acres of PPMA within modeled nesting habitat.</p> <p>Under Alternative C, ROW avoidance acres would remain the same as under Alternative A. Within PPMA, there are</p>	<p>Similar to Alternative B, wild horse and burro management under Alternative D provides significant, short-term, and localized improvements to grass cover and forb availability.</p> <p>Alternative D would allow fluid mineral leasing on all lands with federal fluid mineral estate, but within PPMA and PGMA, leasing would only be allowed with NSO stipulations. NSO stipulations would provide an increased level of protection to all acres of PPMA and PGMA within modeled nesting habitat associated with leks, compared with Alternative A.</p> <p>Impacts on GRSG habitat from locatable minerals management would be the same as under Alternative A.</p> <p>Impacts on GRSG habitat from salable minerals management would be the same as under Alternative C.</p> <p>Applying avoidance criteria throughout PPMA's and PGMA's would result in greater control of impacts</p>	<p>for PFC. BLM riparian areas would be managed to meet RAC standards. Alternative E would promote riparian grazing improvements along with additional infrastructure in order to control season, duration and degree of use. These improvements would be beneficial to late summer brood-rearing habitat for GRSG.</p> <p>Effects from wildfire suppression and fuels management would be similar to the effects described under Alternative D but would emphasize economic incentives to promote rehabilitation and restoration activities.</p> <p>Impacts from wild horse and burro management under Alternative E would be similar to Alternatives B and D.</p> <p>Management under Alternative E would allow leasing within SGMA's on all lands with federal fluid mineral estate. This would include NSO stipulations and a 5 percent surface-disturbance cap. Existing mineral withdrawals would include 1,399,700 acres, and</p>	<p>Under Alternative F, AML for wild horses and burros would be reduced by 25 percent in all HMAs and WHBTs in GRSG habitat. All other management would be the same as under Alternative B.</p> <p>Leasable minerals management under Alternative F would close PPMA's and PGMA's to fluid mineral leasing, as under Alternative C.</p> <p>Impacts from locatable minerals management would be the same as for Alternative B. Impacts from salable minerals management would be the same as for Alternative A.</p> <p>Lands and realty management would be expected to provide greater direct protections to GRSG than Alternative A due to the larger number of acres managed as ROW exclusion. Indirect impacts on habitat would be expected to also be less than Alternative A. For example, all PPMA's</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>at AML would reduce overall impacts on vegetation, especially nesting cover and riparian brood-rearing habitats during periods of drought.</p> <p>Currently, 1,670,800 acres of PPH and PGH as closed to fluid minerals leasing; of this closed area, 834,600 acres is modeled nesting habitat. Lands closed to mineral entry comprise 1,296,100 acres of PPH and 374,700 acres of PGH, including 834,600 acres of PPH and PGH combined. There are 1,670,800 acres closed to mineral material disposal within PPH and PGH, including 834,600 acres of modeled nesting habitat. Closed areas provide an increased level of protection to modeled nesting habitat associated with leks representing 32 percent of the GRSG population for the sub-region, and by sub-population.</p>	<p>Proposed withdrawals from mineral entry under Alternative B would include 12,693,500 acres of PPMAs. Within modeled nesting habitat there would be 10,522,300 acres of PPMA.</p> <p>Alternative B closes 12,693,500 acres of PPMAs to mineral material sales (10,522,300 acres of PPMAs in modeled nesting habitat).</p> <p>Closing PPMAs to leasing, entry, and sales would provide an increased level of protection to modeled nesting habitat associated with leks representing a significant percent of the GRSG population for the sub-region and by sub-population</p> <p>Under Alternative B, more habitat would be managed as ROW avoidance (4,932,400 acres) and exclusion (12,693,500 acres) areas than under Alternative A. Impacts on GRSG</p>	<p>more acres managed as ROW exclusion under Alternative C (17,732,900 acres) than under Alternative A (276,600 acres). Under this alternative, fewer acres are identified for disposal and more areas are prioritized for acquisition. This alternative would result in fewer direct or indirect impacts on GRSG and their habitats compared with Alternative A.</p> <p>Compared with Alternative A, Alternative C eliminates the impacts from renewable energy development on GRSG and its habitat in all seasonal ranges.</p> <p>Under Alternative C, any designated open roads within PPMAs would be managed as limited for motorized travel with the exception of existing closed areas within PPMAs.</p>	<p>on GRSG in these habitats than would occur under Alternative A. ROW exclusion areas would be the same as under Alternative A; therefore these impacts would be expected to be the same.</p> <p>Under Alternative D, all PPMAs and PGMAs would be managed as ROW exclusion for wind facilities. This level of closure provides the maximum preservation of sagebrush habitat.</p> <p>Under Alternative D, PPMAs and PGMAs would be managed as ROW exclusion for new solar energy facilities. This would provide a high level of protection for sagebrush, excluding 17,773,300 acres of sagebrush habitat from new development.</p> <p>Under Alternative D, areas designated as open to cross-country travel within PPMAs and PGMAs from Alternative A would be managed as limited to motorized travel, making it the most limiting to travel management designations.</p>	<p>11,708,400 acres open to leasing would be subject to avoid, minimize, and mitigate policy.</p> <p>Under Alternative E, lands would be generally open to mineral location, except if already withdrawn under current management. Effects on GRSG populations and habitat would be similar to Alternative A.</p> <p>Management under Alternative E would avoid mineral material sales within SGMAs and apply a policy of avoid, minimize, and mitigate. Existing withdrawn acreage, avoidance, and implementation of the avoid, minimize, and mitigate policy would provide an increased level of protection to all acres of occupied and suitable habitat within modeled nesting habitat associated with leks representing 91 percent of the GRSG population for the sub-region.</p> <p>Impacts from lands and realty management would be similar to</p>	<p>would be managed as ROW exclusion for new permits with exceptions for co-location of projects within existing footprints and valid, existing rights.</p> <p>Under Alternative F, solar development would be the same as Alternative A, and the same nature and scope of impacts would be expected.</p> <p>Under Alternative F, wind energy development would be the same as under Alternative D, and solar energy development would be the same as under Alternative A.</p> <p>Impacts from travel and transportation management would be the same as under Alternative B.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>Under current land use and realty management, exclusion would affect 169,600 acres of PPH and avoidance 101,000 acres of PPH. Acres of PPH and PGH identified as available for disposal total 336,300 under Alternative A. Under this alternative, avoidance acres overlap 3 percent of the modeled population in the sub-region and exclusion acres overlap 12 percent of the modeled sub-region population. ROW exclusion and avoidance management would be expected to continue to reduce both direct and indirect impacts on GRSG.</p> <p>Under Alternative A, 276,600 acres are managed for exclusion and 114,200 acres are managed for avoidance of wind energy within existing PPH/PGH.</p>	<p>from lands and realty management would be reduced by greatly increasing acreage subject to ROW avoidance and exclusion and by protection and acquisition of important GRSG habitats.</p> <p>Under Alternative B, impacts from management of lands for wind and solar energy development would be the same as for Alternative A</p> <p>Under Alternative B, 874,600 acres of PPH and PGH would be closed to motorized vehicle use, and 12,992,100 acres would be limited to existing roads and trails. Compared to Alternative A, Alternative B would reduce the potential for vehicle disturbance to GRSG within PPMAs during all phases of their seasonal life history.</p>			<p>Alternative D establishing occupied and suitable habitats within SGMAs as avoidance areas subject to an avoid, minimize, and mitigate strategy which reduce direct or indirect impacts on GRSG and their habitats. This alternative would provide few regulatory mechanisms to reduce direct or indirect impacts on GRSG and their habitat compared with Alternative A.</p> <p>Under Alternative E, renewable energy management would site projects outside of GRSG habitat wherever possible. Because this strategy would not rule out the construction of projects within or adjacent to GRSG habitat, there would be the possibility for more land use for both wind and solar energy development than under Alternative A.</p> <p>Impacts from travel and transportation management would be the same as under Alternative D.</p>	

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Under Alternative A, 874,600 acres of PPH and PGH would be closed to motorized vehicle use, of which 834,600 acres would be modeled nesting habitat. 4,113,200 acres of PPH and PGH would limit motorized vehicles to existing roads/trails, all of which would be modeled nesting habitat.					
<b>Vegetation and Soils</b>					
Integrated Vegetation Management Handbook policies would continue to be followed and would provide guidance on which treatments and chemicals can be used. Application of these policies would improve vegetation management in sagebrush habitat thereby likely improving vegetation conditions in these areas.  A greater acreage of sagebrush may be burned within	Large scale disturbances within PPMAs would not be permitted and small scale disturbances would be limited to 3 percent surface disturbance. This would minimize disturbance to vegetation and soils.  Soils and vegetation management actions under Alternative B would aim to improve vegetation conditions and prioritize restoration efforts to benefit sagebrush vegetation. As a result, the restoration and vegetation management	This alternative relies more on passive restoration and would lead to fewer acres of vegetation management being treated compared with Alternative A. However, it is likely that more acres of crested wheatgrass seedings and cheatgrass invaded areas would be treated improving vegetative conditions for GRSG habitat with success in those areas. With minimizing the use of herbicides to treat annual grasses and noxious weeds fewer acres of acres of treatment would be completed under this	Lands would be managed to meet GRSG and habitat objectives and, as a result, sagebrush/perennial grass ecosystems would be enhanced or maintained.  With suppression efforts focused on PPMAs and PGMAs more acres would likely burn in areas outside PPMAs and PGMAs, increasing the need for ESR treatments in non-GRSG habitat.  Grazing management to achieve vegetation composition and structure consistent with ecological site potential could maintain	Disturbance would be limited to 5 percent in occupied or suitable habitat. This would directly or indirectly increase sagebrush vegetation.  This alternative assigns the Nevada Sagebrush Ecosystem Council with establishment of policies for the identification and prioritization of landscape-scale enhancement, restoration, fuel reduction, and mitigation projects. Without knowing what actions would be taken by the Council, it cannot	Disturbance to sagebrush would be limited to 3 percent surface disturbance. This could maintain sagebrush/perennial grass vegetation communities within PPMAs.  Impacts from vegetation and soils management would be the same as those described under Alternative B, with the exception that this alternative would exclude livestock grazing from burned areas until woody and herbaceous plants



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
PPH areas since this alternative is the least restrictive on wildland fire management within PPH and PGH areas. As a result, a greater loss of vegetation could occur in sagebrush habitats. This could result in an increased risk of annual grass and noxious weeds invasion due to the disturbance.	<p>actions would enhance vegetation beyond the extent and condition relative to Alternative A.</p> <p>Impacts on soils from livestock grazing management are likely to be the same as those identified under Alternative A</p> <p>Fewer acres of sagebrush habitat would be converted to an early seral stage than under Alternative A. However, there could also be a greater potential for catastrophic fire as a result of fire suppression and exclusion.</p>	<p>alternative compared with Alternative A.</p> <p>Perennial grass utilization levels of 10-15 percent could leave fine fuel levels at a high risk for wildfire. Shrub integrity measures could leave sagebrush and other upland shrub species with little impact other than natural forces. All PPMAs and PGMA's closed to livestock grazing could show a reduction in the potential for invasive species establishment. This may not control or reduce the existing invasive species presence.</p> <p>Impacts from wildland fire management would be the same as those described under Alternative A.</p>	<p>or enhance sagebrush and perennial grass conditions within PPMAs. Drought management and livestock resting during the growing season would provide a more resilient plant community.</p> <p>Fewer acres of sagebrush habitat in PPMAs and PGMA's would be converted to an early seral stage, and would have less risk for invasive grass and noxious weed invasion than under Alternative A.</p>	<p>be determined fully what level of impacts would occur as a result of their policies.</p> <p>Grazing management to achieve vegetation composition and structure consistent with ecological site potential could maintain or enhance sagebrush and perennial grass conditions within SGMAs.</p> <p>Impacts from wildland fire management would be the same as under Alternative D.</p> <p>Under Alternative E, OHV routes would be designated to areas outside of SGMAs; disturbance from OHV use on vegetation and soils could be reduced in the SGMAs through the avoidance, minimization, and mitigation of sagebrush/perennial grass communities.</p>	<p>achieve GRSG habitat objectives. This would accelerate burned area recovery towards meeting GRSG habitat requirements.</p> <p>Wild horse AMLs would be reduced by 25 percent within occupied GRSG habitats. While impacts from wild horses and burros would remain, this would reduce the effects of wild horses described under Alternative A.</p> <p>Impacts from wildland fire management would be the same as under Alternative B.</p> <p>Limiting motorized travel to existing routes under Alternative F would minimize disturbance of vegetation and soils from vehicle traffic within the planning area.</p>
<b>Riparian Areas and Wetlands</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Overall, condition and trend of important riparian areas and wetlands within PMUs would likely continue to improve. For example, many programs designed to improve watershed function (fire and fuels, vegetation, livestock and wild horse and burro management) would continue to result in improvement in condition and trend of riparian areas and wetlands within the sub-region.	Identifying 12,693,500 acres as PPMA and 5,039,400 acres for PGMA would result in few land disturbances and could result in reduced impacts on riparian habitats. Protection measures may also include protecting existing riparian areas and associated water sources from future use. As a result, Alternative B could result in fewer impacts on water resources than Alternative A.	In comparison to Alternative A, Alternative C would result in greater improvement in condition and trend of riparian areas and wetlands from GRSG management.	Reducing land disturbances would result in fewer impacts associated with a particular use compared with Alternative A.	Management of riparian areas and wetlands within important GRSG habitat in Nevada would be emphasized through the use of the Nevada Sagebrush Ecosystem Council, the Nevada Technical Team and the Mitigation Bank Program. Enhanced coordination, project facilitation, technical assistance and use of a credit system for effective mitigation would all likely result in improvement condition and trend of riparian areas and wetlands as compared to Alternative A.	Alternative F generally reduces land disturbances and would result in fewer impacts on riparian habitats associated with a particular use compared with Alternative A.
As a result of livestock grazing management, condition and trend of riparian areas and wetlands in PPH and PPG is likely to continue to improve in portions, but not all, of the sub-region.	Actions such as designing new range improvements to conserve, enhance, or restore GRSG habitat, using BMPs to mitigate potential impacts due to West Nile virus when developing or modifying water developments could result in fewer impacts on riparian habitats than Alternative A.	Removal of all grazing from PPMA and PGMA would mean that overall condition and trend of riparian areas and wetlands in PPMA and PGMA would improve in the short term, although long-term improvement is less certain.	Implementing actions including the authorization of new water developments and modifications of existing developments out of riparian areas could alleviate impacts due to grazing. Many of the LUPs do not have these types of tools listed as requirements, so Alternative D could result in fewer impacts on riparian habitats than Alternative A.	Impacts from GRSG management on riparian areas and wetlands are similar to Alternative B, with additional emphasis on protecting priority GRSG habitat. Added focus on both preserving habitat and limiting disturbance would result in more acres of riparian and wetland habitat being improved or protected in comparison to Alternatives A and B.	Impacts from GRSG management on riparian areas and wetlands are similar to Alternative B, with additional emphasis on protecting priority GRSG habitat. Added focus on both preserving habitat and limiting disturbance would result in more acres of riparian and wetland habitat being improved or protected in comparison to Alternatives A and B.
Riparian areas and wetlands could potentially be impacted from activities associated with leasing of fluid minerals over the majority of the planning area	Proposed restoration of crested wheatgrass seedings and cheatgrass infestations, and reclamation of disturbed areas would provide an indirect benefit to riparian areas. In comparison to Alternative A, more acres of riparian areas and wetlands would improve under Alternative C	Utilization standards for riparian areas and sequential restrictions on grazing in the following season would apply to grazing authorizations on allotments not meeting or making progress towards meeting GRSG habitat objectives. Modifying or restricting use of water developments to reduce impacts on riparian areas and wetlands in PPMA and PGMA is also proposed. These actions would improve riparian habitat.	Impacts from grazing management would be similar to those described for Alternative A, although increased emphasis on collaboration and coordination across jurisdictions would likely provide additional opportunities to improve priority riparian and wetlands habitats in Nevada.	For fluid minerals existing withdrawn acreage, avoidance, and implementation of the	Identifying no new water developments in occupied habitat unless they can be shown to benefit GRSG and modifying existing developments to maintain the continuity of the predevelopment riparian area within GRSG habitats, could result in fewer impacts
	Condition and trend of riparian areas and wetlands in PPMA and PGMA is expected to increase as a result of an increased focus	Impacts on riparian areas and wetlands from leasable, locatable, and salable minerals management would be reduced under Alternative C in comparison to Alternative A.	Applying NSO stipulations in PPMA for currently		

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>including PPH and PPG.</p> <p>Because ROW avoidance and exclusion areas make up a relatively small percent of PPH or PPG within the planning area, only limited areas of wetland and riparian habitats would continue to be protected from disturbance.</p>	<p>on managing livestock grazing for late brood rearing habitat.</p> <p>Closing -12,693,500 acres to fluid mineral leasing within PPMAs habitat and implementing actions and conservation measures for areas that are already leased would result in fewer impacts than Alternative A.</p> <p>Withdrawing important GRSG habitat from mineral entry would result in fewer impacts on riparian habitat under Alternative B in comparison to Alternative A.</p> <p>Identifying 4,932,400 acres as ROW avoidance, 12,693,500 acres as exclusion areas and 235,500 acres no longer suitable for disposal could result in fewer impacts on riparian habitats than Alternative A. Under Alternative B, fewer acres of riparian habitats would be impacted from disturbance associated with ROWs in comparison to Alternative A.</p>	<p>Identifying 17,732,000 acres as exclusion areas and 331,200 acres no longer suitable for could result in fewer impacts on riparian habitats than Alternative A.</p> <p>Restricting cross-country travel and removing or closing roads in priority habitats would directly and indirectly benefit riparian areas and wetlands; these measures would improve more acres of riparian habitat in comparison to Alternative A.</p>	<p>unleased areas should result in fewer impacts on riparian habitats than Alternative A.</p> <p>Identifying 17,456,300 acres as ROW avoidance, 276,600 acres as exclusion, and 336,300 acres no longer suitable for disposal would result in fewer impacts on riparian habitats than under Alternative A.</p>	<p>avoid, minimize, and mitigate policy would provide an increased level of protection to all acres of occupied and suitable habitat within modeled nesting habitat associated with leks representing 91 percent of the GRSG population for the sub-region.</p> <p>Under Alternative E, facilities and activities would be avoided in occupied, suitable and potential habitat. This could enhance or maintain vegetation and soils within those three habitat categories as compared to Alternative E.</p>	<p>on riparian habitat than Alternative A.</p> <p>Increased focus on vegetation management for the benefit of GRSG habitat would indirectly benefit riparian and wetland habitat by improving overall watershed health, resulting in greater benefits to these areas in comparison to Alternative A.</p> <p>Condition and trend of riparian habitats would likely improve under Alternative F as a result of a placing greater emphasis on livestock impacts on late summer brood rearing habitat.</p> <p>Impacts on riparian areas and wetlands are similar to Alternatives A, B, and D. Wild horse and burro AMLs would be reduced by 25 percent within HMAs/WHBTs with occupied GRSG habitat. While impacts from wild horses and burros would remain, this would reduce the effects of wild horses and burros described under Alternatives A, B, and D.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
					<p>Impacts from fluid minerals management would be the same as under Alternative B.</p> <p>Impacts from lands and realty management would be the same as under Alternative C.</p> <p>Travel management under Alternative F is similar to Alternative B, but with more focus on planning and on closing or remediating roads in priority habitat. These measures would reduce impacts on riparian areas and wetlands in comparison to Alternatives A and B.</p>
<b>Special Status Species</b>					
<p>Most of the management actions for GRSB would be beneficial for the majority of sensitive species inhabiting in the planning area. The possible exception would be species that require pinyon and juniper woodlands for at least part of their life cycle requirements. The BLM and Forest Service acknowledge the requirements of pinyon and juniper obligate species may be contradictory to the restoration of sagebrush habitat for GRSB, but management decisions would need to be made on a more local case-by-case basis and therefore is not further discussed in this programmatic document.</p>					
<b>Wild Horse and Burros</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Impacts would continue to be the same as those identified in the individual LUP documents.	<p>Allowance of vegetation treatments designed to conserve, enhance, or restore GRSG habitat would also benefit wild horses and burros.</p> <p>Modification or elimination of livestock watering sites could reduce water availability resulting in potential need for reduction of wild horse and burro numbers within a HMA/WHBT.</p> <p>Managing wild horses and burros and their habitat to protect and maintain PPMAs could impact wild horses and burros whose HMAs/WHBTs overlap with these habitats. Prioritizing wild horse and burros gathers in those HMAs/WHBTs that overlap PPMAs could impact population management activities within non-GRSG HMAs/WHBTs. Modification or elimination of watering sites in order to conserve GRSG habitat could reduce water availability resulting in potential need for reduction of wild horse</p>	<p>Impacts from vegetation management would be the same as under Alternative A.</p> <p>Elimination of livestock grazing within SRAs and reducing grazing levels within those areas that retain grazing use to protect and maintain occupied GRSG habitat would benefit wild horses and burros where HMAs/WHBTs overlap with these habitats.</p> <p>Evaluation of AMLs and completing land health assessments may result in need to reduce wild horse and burro numbers within a HMA/WHBT to achieve GRSG habitat needs. Restricting removal and population control techniques could hamper proper management.</p>	<p>Evaluation and prioritization of GRSG habitat restoration treatments identified for PPMAs or PGMAs habitat would benefit wild horse and burro habitat. Associated landscape-scale management and surface disturbance restrictions would also benefit wild horse and burro habitat.</p> <p>Allowance of management treatments designed to conserve, enhance, or restore PPMAs and PGMAs habitats that benefit livestock would also benefit wild horses and burros. Authorization of new or modification of existing livestock watering sites that benefit or conserve PPMAs and PGMAs habitats would benefit wild horses and burros. Elimination of existing water sources that may be identified as impacting PPMAs and PGMAs habitats could reduce water availability resulting in potential need for reduction of wild horse and burro numbers within a HMA/WHBT.</p> <p>Fuels projects that protect and restore existing sagebrush ecosystems and associated PPMAs</p>	<p>Impacts from vegetation management would be the same as under Alternative A.</p> <p>Managing livestock grazing within SGMAs to protect and maintain GRSG habitats would benefit wild horses and burros where HMAs/WHBTs overlap with these habitats.</p> <p>Fire management activities that protect, maintain, and improve sagebrush habitat would benefit wild horses and burros who's HMAs/WHBTs overlap with these habitats.</p> <p>Evaluation of HMA designations and their associated AMLs within SGMAs may result in need for the reduction or elimination of wild horse and burro HMA/WHBT in order to achieve GRSG habitat objectives.</p>	<p>Vegetation treatments designed to conserve, enhance, or restore GRSG habitat would also benefit wild horses and burros.</p> <p>Managing livestock grazing to protect and maintain PPMAs would benefit wild horse and burro habitats.</p> <p>To achieve GRSG habitat objectives, reducing the AMLs of the established HMA/WHBTs within occupied habitat by 25 percent would reduce utilization levels and other impacts associated with wild horses and burros.</p> <p>Fuels treatments that protect existing sagebrush ecosystems and associated PPMAs would benefit wild horses and burros where HMAs/WHBTs overlap with these habitats. However, temporary or long-term management changes to wild horses and burros (i.e. reduction in AML, removals, movement patterns, forage access, etc.) may be necessary</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	and burro numbers within a HMA/WHBT. Prioritizing the evaluation of AMLs and completing land health assessments may result in need for the reduction of wild horse and burro numbers within a HMA/WHBT in order to achieve GRSG habitat objectives.		and PGMA habitats would benefit wild horses and burros where HMAs/WHBTs overlap with these habitats.  Prioritizing wild horse and burros gathers to those HMAs/WHBTs that overlap PPMAs and PGMA habitats could impact population management activities within non-GRSG HMAs/WHBTs. Evaluation of AMLs may result in need for the reduction of wild horse and burro numbers within a HMA/WHBT to achieve GRSG habitat objectives.		to achieve and maintain the desired project objectives.  Prioritizing wild horse and burros gathers to those HMAs/WHBTs that overlap PPMAs could impact population management activities within non-GRSG HMAs/WHBTs. Modification or elimination of watering sites could reduce water availability resulting in potential need for reduction of wild horse and burro numbers within a HMA/WHBT. Prioritizing the evaluation of AMLs, HMA designations, and completing land health assessments may result in need for the reduction or elimination of wild horse and burro populations within a HMA/WHBT in order to achieve GRSG habitat objectives.
<b>Wildland Fire Management</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Few management actions would be applied specific to GRSG habitat protection. Therefore impacts on fire management would continue to vary across the planning area based on site-specific habitat objectives for other resource concerns.	<p>Focusing fire suppression in PPMAs and PGMAs would impose some limits on fuels treatments in this area, resulting in higher level of protection but reduced management options in this area. It would also increase costs for fire management programs as compared with Alternative A because aggressive suppression response to conserve and protect would require more suppression resources.</p> <p>Restricting surface-disturbing activities in PPMAs would decrease the chance for human-caused ignition in PPMAs.</p> <p>Fuels management projects in PPMAs would be designed to reduce wildfire threats in the greatest area thereby decreasing risk of high-intensity fire in PPMAs in the long-term. Restrictions on the location of fuel breaks, and location of other fuels treatments, however, would reduce management options and</p>	<p>Alternative C would generally have the broadest restrictions on fuel management activities extending to all occupied habitat by limiting fuel treatments to the interface of human habitation, and existing disturbances. This would impact the fire program's ability to efficiently manage fuels and could increase costs of vegetation management and fire suppression.</p> <p>Broader restrictions on resource uses and a higher level of protection for all occupied GRSG habitat than Alternative A would further reduce opportunities for human-caused fires.</p> <p>Prohibiting livestock grazing within occupied GRSG habitat would increase fine fuels and fire risk throughout occupied habitat.</p> <p>Reducing vegetation treatments that mimic the natural fire effects would increase the FRCC resulting in an increased potential for large intense wildfires. This increased potential for large wildland</p>	<p>Impacts would be similar to those described under Alternative B, but with an added emphasis on region-specific habitat needs and variations in requirements for specific GRSG habitat types resulting in more site-specific variation in fire management impacts. Alternative D also places added emphasis to pre-suppression planning, prevention, and educational objectives for fire suppression personnel.</p> <p>Alternative D would generally have broader restrictions on resource use and highest level of protection for all occupied GRSG habitat than Alternative A. This would further reduce opportunities for human-caused fires.</p> <p>Impacts from vegetation management would be similar to those described under Alternative B.</p> <p>Impacts from livestock grazing management would be similar to those described under Alternative B.</p> <p>Emphasizing fuels and habitat treatments in PH</p>	<p>Management actions would allow for some level of fuels treatments providing greater flexibility for wildfire management. This alternative places added emphasis on a comprehensive wildfire management program that engages all interagency partners (federal, state &amp; local), to reduce the threats of catastrophic wildfire, rapidly suppress wildfires, and rehabilitate lands damaged by wildfire.</p> <p>Not more than five percent of the occupied and suitable SGMAs and 20 percent of potential habitat would undergo habitat disturbance. This would cause a shift in FRCC to a more historical regime.</p> <p>As shrub and grass cover becomes more continuous and ground cover is higher, the risk for large uncharacteristic fires would increase.</p> <p>Impacts from vegetation management would be similar to those described under Alternative B. Management under Alternative E for riparian</p>	<p>Similar to Alternative B, this alternative would impose some limits on fuels treatments in this area, resulting in higher level of protection but reduced management options. Alternative F also prioritizes fire suppression in only PPMAs, while Alternative B includes both PPMAs and PGMAs. The effects would be the same as Alternative B except there would be a slight reduction in fire suppression costs under this alternative.</p> <p>Maintaining or increasing sagebrush cover to at least 70 percent of the decision area may cause an increase in fire severity and size due to the increase in fuel loading over time. Alternative F also identifies the need to designate sagebrush reserves (e.g., ACECs and Special Conservation Areas), which would cause an increase in planning and implementation costs associated with special designations.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	would increase costs of fuel management.	fire would increase costs associated with both fire suppression and post fire rehabilitation. An increase in fire size would increase the exposure to firefighters and public to the inherent risks associated with firefighting.	and opportunity habitat would result in a long term reduction in risk of high intensity fire in these areas, of particular importance in FRCC III.	<p>areas would lessen impacts from fire by providing technical assistance, project success monitoring, and financial support to areas across the state that were previously burned and currently threatened by fires due to noxious weed infestations or fire fuels.</p> <p>Prepositioning and preventative actions would increase the likelihood of successful fire management actions with response to wildfire, but increase overall management costs. Fuels reduction treatments would be similar to Alternative B, with added emphasis on coordination of state and local agencies and individual landowners.</p>	<p>Restrictions from vegetation management would impact the ability to efficiently manage fuels and could increase costs of vegetation management and limit fire suppression options.</p> <p>Impacts from livestock grazing management would be similar to those described under Alternative D.</p>
<b>Livestock Grazing</b>					
Management designed to address nonattainment of wildlife habitat standards would likely reduce permitted AUMs. Grazing management changes would include the timing, duration, or frequency of permitted use, including temporary closures.	Land health assessments would be conducted on all allotments open to grazing; however, under this alternative, allotments overlapping PPMAs would be the highest priority. Changes to permitted AUMs could occur on up to all PPMAs habitat acres first. The effect would be less than under	<p>Impacts from GRSG management would be the same as under Alternative A.</p> <p>No livestock grazing would be allowed on 37,488,811 acres in the decision area for a total of 0 AUMS in the decision area. This would force permittees/lessees to graze</p>	<p>Impacts from GRSG management would be similar to those under Alternative A.</p> <p>Impacts from livestock grazing management would be greater than those under Alternative A. All PPMA and PGMA acres would be required to meet rangeland health standards, and range improvements would be evaluated to make sure</p>	<p>Impacts from GRSG management would be the similar to Alternative A. Alternative E stresses cooperative, seasonal adjustments to grazing use to ensure that they maintain or enhance SGMAs. Under Alternative A, in contrast, BLM grazing permits are evaluated against Rangeland Health Standards and grazing management changes</p>	<p>Impacts from GRSG management would be the same as under Alternative A.</p> <p>This alternative rests 25 percent of occupied habitat each year. Also, utilization levels are limited to 25 percent. These actions would reduce permitted use drastically in occupied habitat.</p>



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>Current levels and seasons of use would continue pending completion of land health assessments.</p> <p>Forage availability may increase in the long term due to improved land health and forage productivity. Weed control treatments would increase forage availability in the long term by improving native plant productivity.</p> <p>Wildfire would remove livestock forage over the short term but can result in increases in forage post-fire. Impacts on livestock operations could also occur when a livestock grazing rest period is required following vegetation stabilization and rehabilitation treatments post-fire. These required rest periods may impact the ability of livestock operators to fully utilize permitted AUMs.</p>	<p>Alternative A due to the reduced area.</p> <p>Completion of land health assessments and permits would be prioritized within PPMAs, particularly those with the best opportunity to conserve, enhance or restore habitat for GRSG. As a result, impacts on range management would be most likely to occur in these areas.</p> <p>Management actions (grazing decisions, AMP/Conservation Plan developments, or other agreements) to modify grazing management would be made to meet seasonal GRSG habitat requirements. Such changes would have the potential to decrease management options and, therefore, result in increased time and costs required for permittees/lessees.</p> <p>Vegetation restoration may directly affect livestock grazing if treatments include restrictions on available grazing acreage or changes to permitted</p>	<p>on private lands or give up their grazing operations.</p>	<p>they conserve, enhance, or restore GRSG habitat.</p> <p>Wet meadow treatments may result in more restrictions to livestock grazing and the ability to continue existing terms and conditions of permits. Additional acres may be closed to grazing temporarily within allotments to allow for riparian areas and meadows to rest from grazing in order to improve vegetation composition for GRSG habitat.</p> <p>Impacts from wildland fire management would be similar to those described under Alternative B.</p>	<p>must be implemented by the next grazing season, if necessary, when currently permitted use is determined to be causing a GRSG habitat related Standard to be unmet or not making significant progress. Alternative E would result in positive impacts on GRSG habitat in SGMA's where cooperation is present.</p> <p>Impacts from livestock grazing management would be the similar to Alternative A, as current BLM grazing management is required to meet many or all of the desired conditions found outlined in Alternative E.</p> <p>Impacts from vegetation management would be the same as under Alternative A.</p> <p>Impacts from wildland fire management would be the same as under Alternative B.</p>	<p>Range improvement construction would increase due to the need to fence out PPMAs/PGMA's areas from grazing use being permitted on adjacent areas.</p> <p>Impacts from vegetation management would be the same as under Alternative A.</p> <p>Impacts from wildland fire management would be the same as under Alternative A.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	<p>AUMs, grazing strategies, or season of use, which could result in increased cost to permittees. Required rest periods following treatments may impact the ability of livestock operators to fully utilize permitted AUMs. Impacts could occur should treatments for GRSG habitat not match with vegetation objectives for livestock grazing; however, in most cases, treatment would improve forage conditions in the long term.</p> <p>Measures to protect sagebrush habitat might reduce the spread of wildfire and the associated disruption to livestock operations. Forage availability would be maintained or increased long term.</p> <p>Mechanical, manual, and chemical treatments would be utilized to prevent conifer encroachment and prevent the spread of undesirable annual grass and weed species. These actions could improve forage in the long term.</p>				

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<b>Recreation</b>					
Existing recreation opportunities in the planning area would be maintained.	<p>Only BLM SRPs and Forest Service SUPs that have neutral or beneficial effects would be allowed in approximately 12,693,500 acres of PPMAs. This may restrict some types of permitted uses. As a result, some types of permitted activities (e.g., OHV races) that could negatively affect PPMAs may be impacted resulting in fewer opportunities to engage in those types of events and activities in those areas.</p> <p>OHV area designation would change 8,878,900 acres from open to limited in PPMAs. The restriction on cross-country travel may impact some motorized recreation, such as OHV exploration which depends on unrestricted travel. However, opportunities for nonmotorized recreation, such as hiking, horseback riding, and hunting, in a more natural or primitive setting may be expanded and enhanced.</p>	<p>Impacts from GRSG management would be the same as under Alternative A.</p> <p>OHV area designation would change 12,744,900 acres from open to limited in PPMAs/PGMAs. The restriction on cross-country travel may impact some motorized recreation, such as OHV exploration which depends on unrestricted travel. However, opportunities for nonmotorized recreation, such as hiking, horseback riding, and hunting, in a more natural or primitive setting may be expanded and enhanced.</p>	<p>Only BLM SRPs and Forest Service SUPs that have neutral or beneficial effects in approximately -17,732,900 acres of both PPMAs and PGMAs would be allowed. As a result, some types of permitted activities (e.g., OHV races) that could negatively affect PPMAs/PGMAs may be impacted resulting in fewer opportunities to engage in those types of events and activities in those areas.</p> <p>Impacts from travel and transportation management would be the same as under Alternative C.</p>	Impacts from GRSG and travel and transportation management would be the same as under Alternative D.	<p>Only BLM SRPs and Forest Service SUPs that have neutral or beneficial effects on approximately 12,693,500 acres in PPMA. As a result, some types of permitted activities (e.g., OHV races) that could negatively affect PPMAs/PGMAs may be impacted resulting in fewer opportunities to engage in those types of events and activities in those areas. Additional management actions that would seasonally prohibit camping and other nonmotorized recreation activities within four miles of active leks would decrease the area available for recreational opportunities such as camping, mountain biking, and hiking, resulting in seasonal reductions in recreational opportunities.</p> <p>Impacts from travel and transportation management would be the same as under Alternative C.</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<b>Travel and Transportation Management</b>					
Existing travel opportunities in the planning area would be maintained.	<p>There would be 8,878,900 acres in PPMAs previously open to cross-country travel where motorized travel would be limited to existing routes. This would reduce opportunities for cross-country travel in the decision area.</p> <p>The 3 percent disturbance threshold could restrict the amount of new routes that could be constructed; any routes constructed in excess of the disturbance cap would require mitigation necessary to offset the resulting loss of habitat.</p> <p>Impacts from implementation actions, such as evaluating the need for permanent or seasonal road closures, activity-level travel plans, limiting new route construction, and restoration of routes in PPMAs would be analyzed in subsequent NEPA documents.</p>	<p>There would be 17,732,900 acres in PPMAs and PGMA previously open to cross-country travel where motorized travel would be limited to existing routes. This would reduce opportunities for cross-country travel in the decision area.</p> <p>Impacts from implementation actions, such as evaluating the need for permanent or seasonal road closures in PPMAs/PGMAs would be analyzed in subsequent NEPA documents.</p>	<p>There would be 17,732,900 acres in PPMAs and PGMA previously open to cross-country travel where motorized travel would be limited to existing routes. This would reduce opportunities for cross-country travel in the decision area.</p> <p>Upgrades to existing routes that would change the route category would be prohibited, and route construction would be limited to realignments of existing routes that minimize impacts on PPMAs/PGMAs. These actions would result in fewer upgrades to the travel network to accommodate current and future use.</p> <p>Impacts from implementation actions, such as evaluating the need for permanent or seasonal road closures in PPMAs/PGMAs would be analyzed in subsequent NEPA documents.</p>	Impacts from Alternative E would be the same as or similar to those under Alternative D.	Impacts would be the same as or similar to those under Alternative B, except Alternative F would further restrict the construction of new routes by not allowing new routes within a 4-mile buffer from leks. This would result in fewer new travel opportunities.
<b>Lands and Realty</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
The continuation of current management would have direct impacts on the ROW program by allowing new facilities to be constructed and service renewable energy projects.	<p>Management actions to protect GRSG habitat would impact lands and realty through the closure of areas to ROW authorizations, additional criteria for land exchanges, and limitations on new mineral development and road construction.</p> <p>Limitations on new ROWs and above-ground linear features, such as transmission lines and pipelines, could restrict the availability of energy or service availability and reliability for communication systems.</p>	<p>This alternative would make PPMAs areas designated as ACECs. All lands within the ACECs would be managed as ROW exclusion; Alternative C would impose the greatest limitations on the lands and realty program.</p> <p>Impacts on ROW authorizations would be similar to Alternative B, but would apply to a larger land area and there would be no designated corridors to accommodate new ROW infrastructure. For linear ROWs (e.g. pipelines and transmission lines) this could increase the length of these projects, thus increasing project costs. Costs also would be incurred as a result of requirements for mitigation in areas with limits on surface disturbance.</p>	<p>PPMAs would be managed as ROW/SUP avoidance areas. These additional restrictions would impact processing time for BLM and increased cost for the applicants. Alternative D would have greater limitations on the lands and realty program than Alternative A, but fewer impacts than Alternatives B and C.</p> <p>This alternative allows the most flexibility in acres available for acquisition, disposal, or exchange because there is no management action proposed to retain public ownership of PPMAs.</p>	Under Alternative E, the BLM/Forest Service would allow ROW development within GRSG habitat subject to ROW conditions. Specific mitigation measures would be set in place to avoid, minimize, and mitigate impacts on leks, nesting, brood-rearing, and wintering habitats. Infrastructure would not be located within 0.6 mile of specific habitat. Traveling along routes would be limited to specific times that least impact habitats. These increased measures would restrict ROW development in specific areas and would impact management and maintenance of existing and future development.	New ROWs would be excluded in PPMAs and the BLM would un-designate all currently designated ROW corridors within occupied habitat. Impacts on ROW authorizations would be similar to Alternative B, but would apply to a larger land area and there would be no designated corridors to accommodate new ROW infrastructure.
<b>Renewable Energy</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Within existing PPH/PGH 114,200 acres would continue to be managed as ROW avoidance areas, while 276,600 acres would be designated exclusion. All other lands within the decision area would continue to be open for ROW development. Continuation of current management would have direct impacts on the ROW program by allowing new facilities to be constructed and service renewable energy projects.	Impacts from GRSG management would be similar to Alternative for wind.  Limitations on new ROWs and above-ground linear features, such as transmission lines, fiber optic, natural gas lines, and power substations, would limit the BLM's ability to accommodate demand for renewable energy ROW development, which in turn could restrict the availability of energy or service availability and reliability for communication systems.	Impacts from GRSG management would be similar to Alternative for wind.  Limitations on new ROWs and above-ground linear features, such as transmission lines, would limit the BLM's ability to accommodate demand for renewable energy ROW development, which in turn could restrict the availability of energy or service availability and reliability for communication systems.	12,693,500 acres of PPMAs and 5,039,400 acres of PGMAs on public lands would be managed as wind ROW exclusion areas and would not be open for Renewable Energy ROW applications.  Limitations on new ROWs and above-ground linear features, such as transmission lines, would limit the BLM's and Forest Service's ability to accommodate demand for renewable energy ROW development, which in turn could restrict the availability of energy or service availability and reliability for communication systems.	Impacts from GRSG management would be similar to Alternative A except decisions would avoid occupied and suitable habitat wherever possible.  Limitations on new ROWs and above-ground linear features, such as transmission lines, would limit the BLM's and Forest Service's ability to accommodate demand for renewable energy ROW development, which in turn could restrict the availability of energy or service availability and reliability for communication systems.  Measures limiting travel along certain routes and prohibiting infrastructure within 0.6-mile of a lek would restrict renewable energy development in specific areas and would impact management and maintenance of existing and future development.	12,693,500 acres of PPMA and 5,039,400 acres of PGMAs on public lands would be managed as wind ROW exclusion areas and would not be open for Renewable Energy ROW applications. Limitations on new ROWs and above-ground linear features, such as transmission lines, would limit the BLM's and Forest Service's ability to accommodate demand for renewable energy ROW development, which in turn could restrict the availability of energy or service availability and reliability for communication systems.
<b>Minerals – Fluid</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
It is projected that 100 new exploratory and development wells would be drilled on during the life of the LUP. Of these new wells, 48 are expected to be producing oil and gas (see <b>Appendix H</b> ).	<p>Overall, as a result of increased restrictions and limitations as compared to Alternative A, Alternative B would result in an increase in the magnitude and duration of effects on fluid minerals development over time.</p> <p>Geophysical exploration would be permitted within PPMAs areas with restrictions. These restrictions would likely reduce the amount of geophysical exploration within the decision area, which could reduce the amount of fluid mineral resources that are identified and developed.</p>	<p>The Forest Service and BLM would develop strategies to terminate existing leases and close the decision area to leasing. This would reduce the amount of fluid mineral resource exploration and development on existing leases within the decision area.</p> <p>No lands within the decision area would be available for new ROWs. Because federally managed lands are closed to leasing under this alternative, there would be no impacts on public lands. However, Alternative C could decrease development of fluid mineral projects on private lands by decreasing the accessibility and availability to develop infrastructure (e.g. pipelines and transmission lines).</p>	<p>All federal fluid minerals in PPMAs would be open to fluid mineral leasing subject to a NSO stipulation that provides no exception, modification or waiver language. This stipulation would restrict leasing on 144,300 acres of unleased lands with high oil and gas potential.</p> <p>Geophysical exploration would be permitted within PPMAs areas with restrictions. These restrictions would likely reduce the amount of geophysical exploration within the decision area, which could reduce the amount of fluid mineral resources that are identified and developed.</p> <p>Limitations on new ROWs and above-ground linear features, such as transmission lines, would limit the BLM's ability to accommodate demand for fluid mineral ROW development, which in turn could restrict the availability of fluid minerals.</p>	Under Alternative E, all GRS habitat would be avoided through the use of stipulations with exception, waiver, and modification language. The impacts on leasable minerals would be less than those described under Alternative A.	In addition to applying the restrictive management under Alternative B to more acres, Alternative E would call for COAs implementing seasonal restrictions on vehicle traffic and human presence associated with exploratory drilling. Overall, as a result of increased restrictions and limitations as compared to Alternative A, Alternative F would result in an increase in the magnitude and duration of effects on fluid minerals development over time.
<b>Minerals – Locatable</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
This alternative would be the least restrictive to locatable minerals because a larger percentage of the planning area would continue to be open to locatable mineral entry and no additional restrictions would be applied to mining operations.	Total withdrawals (including lands currently withdrawn) under this alternative would increase 274 percent in comparison with Alternative A; thereby further limiting opportunities for locatable mineral development in the decision area.	Impacts would be the same as under Alternative A.	Additional restrictions and design features for locatable minerals may apply in PPMAs and PGMAs. This could result in (1) reduced availability of locatable mineral resources, (2) reduced access to new or existing mines due to restrictions on use of the overlying surface lands, and (3) reduced efficiency and increased operational costs that make potential locatable mineral development economically infeasible.	Additional restrictions and design features for locatable minerals may apply in GRSG habitat. This could result in (1) reduced availability of locatable mineral resources, (2) reduced access to new or existing mines due to restrictions on use of the overlying surface lands, and (3) reduced efficiency and increased operational costs that make potential locatable mineral development economically infeasible.	Impacts would be the same as under Alternative B.
<b>Minerals – Salable</b>					
Approximately 1,670,800 acres of federal mineral estate within existing habitat would continue to be closed to mineral material disposal.  Road construction would likely decrease on BLM- and Forest Service-administered surface in the decision area that would continue to be managed as ROW avoidance or exclusion under this alternative, which would result in a decrease in demand for mineral materials in those	Approximately 12,693,500 acres of federal mineral estate in PPMAs would be closed to mineral material disposal. These closures would decrease access for local governments and members of the public to mineral material sites.  Requiring reclamation of mineral material pits in PPMAs no longer in use could increase costs on developers if the BLM and Forest Service required the developers to pay for the reclamation.	Impacts would be the same as under Alternative A.	Approximately 12,927,400 acres of federal mineral estate in PPMAs and 4,805,500 acres of federal mineral estate in PPMAs would be closed to mineral material disposal. The types of impacts from these closures would decrease access for local governments and members of the public to mineral material sites.  In PPMAs, mineral material pits no longer in use would be restored to meet GRSG habitat conservation objectives. Requiring reclamation of mineral material pits no longer in use could increase costs on developers if the BLM and	Under Alternative E, acres of federal mineral estate closed to disposal would be the same as Alternative A. However, additional restrictions would apply within areas open within GRSG habitat, including maximum disturbance of no more than five percent of occupied habitat in each population area. Noise, structure height, and timing limitations would also apply and mitigation may be required. This may result in decreased access for local governments and members of the public to mineral material sites and/or increase	Impacts would be the same as under Alternative B.



Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
areas. Impacts from this decrease in demand would be mitigated where new ROWs could be co-located within existing ROWs to satisfy valid existing rights.			Forest Service required the developers to pay for the reclamation.	costs of mineral material development.	
<b>Areas of Critical Environmental Concern</b>					
Management decisions would continue to provide supplemental support for the protection of existing ACEC relevance and importance values.	Impacts would be the same as under Alternative A.	<p>The number of acres under ACEC management would increase exponentially. In certain circumstances, GRSG Management decisions may benefit and compliment management decisions protecting relevance and importance values in existing ACECs.</p> <p>The increase in the amount of acreage under GRSG ACECs may be both beneficial and detrimental to other special designations. Suitable wild and scenic river segments may see long term benefits from proposed management decisions that involve vegetative restoration which can enhance the river corridors. While cultural and wildlife related ACECs may see impairments which could cause irreparable harm to relevance and importance</p>	Impacts would be the same as under Alternative A.	Impacts would be the same as under Alternative A.	Impacts would be the same as under Alternative C.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
		values. Potential impacts on wilderness and WSAs would be offset by Minimal Requirements Analysis and the Minimum Requirements Decision Guide, which would mitigate GRSG management projects methodology and activities within these areas. Potential impacts on National Historic Trails are tentative; surface impacts on the trail tread can be mitigated and avoided where the tread is known. However, current NHT management direction also emphasizes the setting of the trail as part of the trail experience.			
<b>Water Resources</b>					
Identifying 114,200 acres as ROW avoidance and 276,600 acres as exclusion areas would continue to limit the amount of man-made runoff of soils and chemicals into waterways within those areas and are generally considered to be protective of water quality. ROW exclusion and avoidance are also seen to reduce the likelihood of	Alternative B generally reduces land disturbances and would result in fewer impacts on water resources associated with a particular use compared with Alternative A.  Identifying 4,932,400 acres as ROW avoidance, 12,693,500 acres as exclusion, and 235,500 acres no longer suitable for disposal, could result in fewer impacts on	Identifying 114,200 acres as ROW avoidance and 17,732,900 acres as exclusion areas would result in fewer impacts on water resources than Alternative A.  Eliminating grazing from occupied habitat should result in fewer impacts on water resources than Alternative A.  Impacts from fluid minerals management would be the same as under Alternative A.	Alternative D generally reduces land disturbances and would result in fewer impacts on water resources associated with a particular use compared with Alternative A.  Identifying 17,456,300 acres as ROW avoidance and 276,600 acres as exclusion areas could result in fewer impacts on water resources than Alternative A.  Impacts from livestock grazing management would	Alternative E does not outline specific management actions and would result in similar impacts on water resources as Alternative A.	Alternative F generally reduces land disturbances and would result in fewer impacts on water resources associated with a particular use compared with Alternative A.  Impacts from lands and realty management would result in fewer impacts on water resources than under Alternative A, because there would be a 3% cap on disturbance within GRSG habitat.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
chemical spills onto the ground, which can then sink into the earth and contaminate groundwater.	water resources than Alternative A.	Impacts from wildland fire management would be the same as under Alternative A.	be the same as under Alternative A.		Impacts from livestock grazing management would be the same as under Alternative A.
Identifying 17,551,600 acres as open to livestock grazing would generally continue to cause decreases in water quality through the heavy trampling of soils and vegetation along and within natural water features that are also used by GRSG as drinking water sources. At the same time, water supply structures throughout the landscape that have been established for the benefit of livestock and wild horses and burros also often provide drinking water sources for GRSG.	Impacts from livestock grazing management would be the same as under Alternative A.		Identifying 1,670,800 acres as closed to fluid minerals, oil and gas and geothermal and applying NSO stipulations in PPMA's for currently unleased areas should result in fewer impacts on water resources than Alternative A.		Impacts from wild horse and burro management would be similar to Alternative A, except that wild horse AMLs would be reduced by 25 percent within occupied GRSG habitats.
Identifying 16,061,900 acres as open to fluid minerals, oil and gas and geothermal leasing would generally continue to increase the risk of impairments to local	Under Alternative B, 13,068,600 acres of PPMA and PGMA would be closed to mineral leasing oil and gas and geothermal; 4,664,700 acres would be open to fluid mineral leasing, oil and gas, and geothermal development. This would result in fewer impacts on water resources than Alternative A.		Alternative D does not specify any specific numbers of acres for hazardous fuels management. It does identify general actions for suppression activities, pre- and post-fire treatment activities, timing of treatments, resting, and use of native plants for revegetation. Based on these actions, Alternative D could have fewer impacts on water resources than Alternative A.		Impacts from wildland fire management would be the same as under Alternative B.
	Alternative B does not specify any specific numbers of acres for hazardous fuels management nor does it specify suppression activities. It does identify general actions for pre- and post-fire treatment activities, timing of treatments, resting, and use of native plants for revegetation. Based on these actions, Alternative B could have fewer impacts on				Impacts from fluid minerals management, locatable minerals management, or salable minerals management would be reduced in comparison to Alternative A because fewer activities would be permitted.
					The 3% cap on disturbance from renewable energy development within GRSG habitat under Alternative F could result in fewer impacts on water resources than Alternative A.

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>surface waters and groundwater.</p> <p>Alternative A does not specify any specific numbers of acres for hazardous fuels management nor does it specify suppression activities or post-fire rehabilitation treatments. Effects of fire on water resources are determined largely by the severity of the fire, suppression tactics used for fire management and post-fire precipitation regimes. Hazardous fuels treatments will continue to result in an overall decrease in wildfire potential, thereby decreasing impacts on water resources.</p>	<p>water resources than Alternative A.</p>				<p>Fewer travel and transportation activities permitted on the landscape under Alternative F would lessen impacts on water quality compared to Alternative A.</p>
Tribal Interests					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<p>This alternative could lead to decreased opportunities for tribes to maintain traditional cultural practices and values such as observing lekking behavior if the nonestablishment of PPH/PGH acres leads to future decreases in GRSG populations.</p> <p>This alternative is expected to maintain tribal access to pine nutting areas and observing lekking behavior because future access to these areas would likely be maintained at current levels.</p> <p>Comprehensive travel and transportation management would maintain current tribal access to important pine nutting areas and juniper trees used to maintain traditional tribal cultural practices and values.</p>	<p>GRSG management goals and objectives could lead to increased opportunities for tribes to maintain traditional cultural practices and values such as observing lekking behavior.</p> <p>Because this alternative proposes ROW avoidance in PPMAs and/or PGMAs, this could result in decreased opportunities for tribes to maintain traditional practices through restrictions imposed on access to pine nutting areas and observing lekking behavior. However, exceptions to tribes to access current areas used for traditional practices could be granted in future site-specific NEPA analyses.</p> <p>While this alternative would limit motorized travel to existing roads within PPMAs, current tribal access to important pine nutting areas and juniper trees used to maintain traditional tribal cultural practices and values would be maintained.</p>	<p>GRSG management goals and objectives could lead to increased opportunities for tribes to maintain traditional cultural practices and values such as observing lekking behavior.</p> <p>Because this alternative proposes ROW avoidance in PPMAs and/or PGMAs habitat, this could result in decreased opportunities for tribes to maintain traditional practices through restrictions imposed on access to pine nutting areas and observing lekking behavior. However, exceptions to tribes to access current areas used for traditional practices could be granted in future site-specific NEPA analyses.</p> <p>This alternative would limit motorized travel to existing roads within PPMAs; however, current tribal access to important pine nutting areas and juniper trees used to maintain traditional tribal cultural practices and values would likely be maintained.</p>	<p>GRSG management goals and objectives could lead to increased opportunities for tribes to maintain traditional cultural practices and values such as observing lekking behavior.</p> <p>Because this alternative proposes ROW avoidance in PPMAs and/or PGMAs habitat, this could result in decreased opportunities for tribes to maintain traditional practices through restrictions imposed on access to pine nutting areas and observing lekking behavior. However, exceptions to tribes to access current areas used for traditional practices could be granted in future site-specific NEPA analyses.</p> <p>Impacts from travel and transportation would be the same as under Alternative C.</p>	<p>GRSG management goals and objectives could lead to increased opportunities for tribes to maintain traditional cultural practices and values such as observing lekking behavior.</p> <p>This alternative is expected to maintain tribal access to pine nutting areas and observing lekking behavior because future access to these areas would likely be maintained at current levels.</p> <p>Impacts from travel and transportation would be the same as under Alternative D.</p>	<p>GRSG management goals and objectives could lead to increased opportunities for tribes to maintain traditional cultural practices and values such as observing lekking behavior.</p> <p>Because this alternative proposes ROW avoidance in PPMAs and/or PGMAs habitat, this could result in decreased opportunities for tribes to maintain traditional practices through restrictions imposed on access to pine nutting areas and observing lekking behavior. However, exceptions to tribes to access current areas used for traditional practices could be granted in future site-specific NEPA analyses.</p> <p>Impacts from travel and transportation would be the same as under Alternative B.</p>
<b>Climate Change</b>					

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Impacts would be the same as those resulting from current management and no changes to greenhouse gas (GHG) emissions would occur.	<p>Alternative B generally constrains resource use and would decrease any GHG emissions associated with a particular use compared with Alternative A.</p> <p>Implementation of Alternative B would result in overall conservation of PPMAs and PGMAs reducing anthropogenic disturbances and potential for GHG emissions.</p> <p>Closing areas of high potential to fluid mineral leasing and development would have the potential to result in fewer releases of GHGs in the planning area as compared with Alternative A.</p>	Alternative C generally constrains resource use and would decrease any GHG emissions associated with a particular use compared with Alternative A.	<p>Alternative D generally constrains resource use and would decrease any GHG emissions associated with a particular use compared with Alternative A.</p> <p>NSO stipulations in PPMAs for currently unleased areas and conservation measures for reducing land disturbance on leased areas would result in fewer impacts than Alternative A.</p>	Alternative E does not outline specific management actions and would result in similar impacts on climate change as Alternative A.	Alternative F generally constrains resource use, and would require a 3% cap on disturbance within GRSG habitat; this would decrease any GHG emissions associated with a particular use compared with Alternative A.
Socioeconomic and Environmental Justice					
Under Alternative A, existing opportunities for grazing, recreation, mineral development, lands and realty (including renewable energy development), and travel would not be affected. There would be no change in annual output, annual jobs, or annual earnings.	<p>Under Alternative B, reductions in oil and gas, geothermal, and wind energy development opportunities would result in reductions in output, employment, and earnings compared to Alternative A.</p> <p>Alternative B would also impose limitations and added costs to future economic investments</p>	<p>Adverse impacts on output, employment, and earnings would be greater in Alternative C than any other alternative.</p> <p>Under Alternative C, economic activity attributable to grazing and oil and gas, geothermal, and ROW (including wind energy) development on federal lands would</p>	<p>Under Alternative D, reductions in output, employment, and earnings compared to Alternative A would be entirely due to anticipated reductions in geothermal exploration and development.</p> <p>Economic activity due to grazing on federal lands within GRSG habitat would likely result in some reductions in economic</p>	Changes in output, employment, and earnings under Alternative E would be similar to Alternative A. Note that restrictions in Alternative E would affect Nevada only.	<p>Under Alternative F, reductions in output, employment, and earnings compared to Alternative A would be primarily due to anticipated reductions in oil and gas development, geothermal exploration and development, and new ROWs.</p> <p>Alternative F would also reduce economic</p>

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
	<p>in ROW development, including new roadways, compared with Alternative A</p> <p>Economic activity attributable to grazing on federal lands with GRSG habitat is likely to be broadly similar to Alternative A.</p> <p>The economic effect from recreational activity, locatable minerals, and salable minerals is not possible to quantify, but if there is a difference versus Alternative A, it is likely to be small.</p>	<p>be reduced compared to Alternative A.</p> <p>PPMAs would be closed to livestock grazing, new ROWs, and new fluid mineral leasing. Livestock grazing on federal lands would be restricted to those allotments with no GRSG habitat, which would account for more than two-thirds of the output, employment, and earnings reductions under Alternative C when compared to Alternative A.</p>	<p>activity compared to Alternative A (and the magnitude of impact would be lower than in Alternative B), but to what extent is unknown.</p> <p>Restrictions and costs to infrastructure development, including wind energy and roads, under Alternative D would be greater than under Alternative A but less than under Alternatives B or C.</p>		<p>activity due to grazing on federal lands because of the closure of some PPMAs and PGMA's to livestock grazing, as well as the action to rest a portion of PPMAs and PGMA's each year and limit utilization levels.</p>

## 2.10. Comparison of Alternatives Alleviation of USFWS-Identified Threats

Approaches to GRSG management and alleviation of the USFWS-identified threats, as identified in the COT report, vary by alternative. See **Appendix I**, Comparison of Alternatives Alleviation of USFWS-Identified Threats, which summarizes and cross references specific management by the applicable BLM and Forest Service resource programs under each alternative with the USFWS-identified threat.

### Note

Data from geographic information systems (GIS) have been used in developing acreage calculations and for generating many of the figures. Calculations in this EIS are rounded and are dependent upon the quality and availability of data. Data were collected from a variety of sources, including the BLM, collaborative partners, stakeholders, and cooperating agencies. Given the scale of the statewide analysis, the compatibility constraints between datasets, and lack of data for some resources, all calculations are approximate and serve for comparison and analytic purposes only. Likewise, the figures are provided for illustrative purposes and subject to the limitations discussed above. Detailed, site-specific information is available from local BLM offices. BLM may receive additional GIS data; therefore, the acreages may be recalculated and revised at a later date.

(PDF Map 2–1)

**Figure 2.1. Alternative A: Preliminary Priority and General Habitat**

(PDF Map 2–2)

**Figure 2.2. Alternative B: Preliminary Priority and General Management Areas**

(PDF Map 2–3)

**Figure 2.3. Alternative C: Preliminary Priority Management Areas**

(PDF Map 2–4)

**Figure 2.4. Alternative D: Preliminary Priority and General Management Areas**

(PDF Map 2–5)

**Figure 2.5. Alternative E: Greater Sage-Grouse Management Areas Occupied and Suitable Habitat**

(PDF Map 2–6)

**Figure 2.6. Alternative F: Preliminary Priority and General Management Areas**

(PDF Map 2–7)

**Figure 2.7. Alternatives A, B, C, and F: Wild Horses and Burros**

(PDF Map 2–8)

**Figure 2.8. Alternative D: Wild Horses and Burros**

*Chapter 2 Proposed Action and Alternatives  
Comparison of Alternatives Alleviation of  
USFWS-Identified Threats*



(PDF Map 2–9)

**Figure 2.9. Alternative E: Wild Horses and Burros**

(PDF Map 2–10)

**Figure 2.10. Alternative A: Livestock Grazing**

(PDF Map 2–11)

**Figure 2.11. Alternative C Livestock Grazing**

(PDF Map 2–12)

**Figure 2.12. Alternative A: Comprehensive Travel and Transportation Management**

(PDF Map 2–13)

**Figure 2.13. Alternatives B and F: Comprehensive Travel and Transportation Management**

(PDF Map 2–14)

**Figure 2.14. Alternative C: Comprehensive Travel and Transportation Management**

(PDF Map 2–15)

**Figure 2.15. Alternative D: Comprehensive Travel and Transportation Management**

(PDF Map 2–16)

**Figure 2.16. Alternative E: Comprehensive Travel and Transportation Management**

(PDF Map 2–17)

**Figure 2.17. Alternative A: ROW Exclusion and Avoidance**

(PDF Map 2–18)

**Figure 2.18. Alternative B: ROW Exclusion and Avoidance**

(PDF Map 2–19)

**Figure 2.19. Alternative C: ROW Exclusion and Avoidance**

(PDF Map 2–20)

**Figure 2.20. Alternative D: ROW Exclusion and Avoidance**

(PDF Map 2–21)

**Figure 2.21. Alternative E: ROW Exclusion and Avoidance**

(PDF Map 2–22)

**Figure 2.22. Alternative F: ROW Exclusion and Avoidance**

(PDF Map 2–23)

**Figure 2.23. Alternative A: Land Tenure**

(PDF Map 2–24)

**Figure 2.24. Alternative B: Land Tenure**

(PDF Map 2–25)

**Figure 2.25. Alternative C: Land Tenure**

(PDF Map 2–26)

**Figure 2.26. Alternative D: Land Tenure**

(PDF Map 2–27)

**Figure 2.27. Alternative F: Land Tenure**

(PDF Map 2–28)

**Figure 2.28. Alternatives A, B, and C: Wind ROW Exclusion and Avoidance**

(PDF Map 2–29)

**Figure 2.29. Alternative D: Wind ROW Exclusion and Avoidance**

(PDF Map 2–30)

**Figure 2.30. Alternative E: Wind ROW Exclusion and Avoidance**

(PDF Map 2–31)

**Figure 2.31. Alternative F: Wind ROW Exclusion and Avoidance**

(PDF Map 2–32)

**Figure 2.32. Alternatives A, B, and F: Utility-Scale Solar**

(PDF Map 2–33)

**Figure 2.33. Alternative C: Utility-Scale Solar**

(PDF Map 2–34)

**Figure 2.34. Alternative D: Utility-Scale Solar**

(PDF Map 2–35)

**Figure 2.35. Alternative E: Utility-Scale Solar**

(PDF Map 2–36)

**Figure 2.36. Alternative A: Open and Closed to Oil and Gas**

*Chapter 2 Proposed Action and Alternatives  
Comparison of Alternatives Alleviation of  
USFWS-Identified Threats*

(PDF Map 2–37)

**Figure 2.37. Alternative B: Open and Closed to Oil and Gas**

(PDF Map 2–38)

**Figure 2.38. Alternative C: Open and Closed to Oil and Gas**

(PDF Map 2–39)

**Figure 2.39. Alternative D: Open and Closed to Oil and Gas**

(PDF Map 2–40)

**Figure 2.40. Alternative F: Open and Closed to Oil and Gas**

(PDF Map 2–41)

**Figure 2.41. Alternative B: Open to Oil and Gas, Leased, No New Surface Occupancy**

(PDF Map 2–42)

**Figure 2.42. Alternative D: Open to Oil and Gas, Un-leased, No Surface Occupancy**

(PDF Map 2–43)

**Figure 2.43. Alternative E: Open to Oil and Gas, Avoidance**

(PDF Map 2–44)

**Figure 2.44. Alternative A: Open and Closed to Geothermal**

(PDF Map 2–45)

**Figure 2.45. Alternative B: Open and Closed to Geothermal**

(PDF Map 2–46)

**Figure 2.46. Alternative C: Open and Closed to Geothermal**

(PDF Map 2–47)

**Figure 2.47. Alternative D: Open and Closed to Geothermal**

(PDF Map 2–48)

**Figure 2.48. Alternative F: Open and Closed to Geothermal**

(PDF Map 2–49)

**Figure 2.49. Alternative B: Open to Geothermal, Un-leased, No New Surface Occupancy**

(PDF Map 2–50)

**Figure 2.50. Alternative D: Open to Geothermal, Leased, No Surface Occupancy**

(PDF Map 2–51)

**Figure 2.51. Alternative E: Open to Geothermal, Avoidance**

(PDF Map 2–52)

**Figure 2.52. Alternative A: Locatable Minerals**

(PDF Map 2–53)

**Figure 2.53. Alternatives B and F: Locatable Minerals**

(PDF Map 2–54)

**Figure 2.54. Alternative C: Locatable Minerals**

(PDF Map 2–55)

**Figure 2.55. Alternative D: Locatable Minerals**

(PDF Map 2–56)

**Figure 2.56. Alternative E: Locatable Minerals**

(PDF Map 2–57)

**Figure 2.57. Alternative A: Open and Closed to Mineral Material Sales**

(PDF Map 2–58)

**Figure 2.58. Alternatives B and F: Open and Closed to Mineral Material Sales**

(PDF Map 2–59)

**Figure 2.59. Alternative C: Open and Closed to Mineral Material Sales**

(PDF Map 2–60)

**Figure 2.60. Alternative D: Open and Closed to Mineral Material Sales**

(PDF Map 2–61)

**Figure 2.61. Alternative E: Open and Closed to Mineral Material Sales**

(PDF Map 2–62)

**Figure 2.62. Alternative A: Open and Closed to Nonenergy Leasable Minerals**

(PDF Map 2–63)

**Figure 2.63. Alternatives B and F: Open and Closed to Nonenergy Leasable Minerals**

(PDF Map 2–64)

**Figure 2.64. Alternative C: Open and Closed to Nonenergy Leasable Minerals**

(PDF Map 2–65)

**Figure 2.65. Alternative D: Open and Closed to Nonenergy Leasable Minerals**

(PDF Map 2–66)

**Figure 2.66. Alternative E: Open and Closed to Nonenergy Leasable Minerals**

(PDF Map 2–67)

**Figure 2.67. Alternatives A, B, D, and E: Areas of Critical Environmental Concern**

(PDF Map 2–68)

**Figure 2.68. Alternative C: Areas of Critical Environmental Concern**

(PDF Map 2–69)

**Figure 2.69. Alternative F: Areas of Critical Environmental Concern**